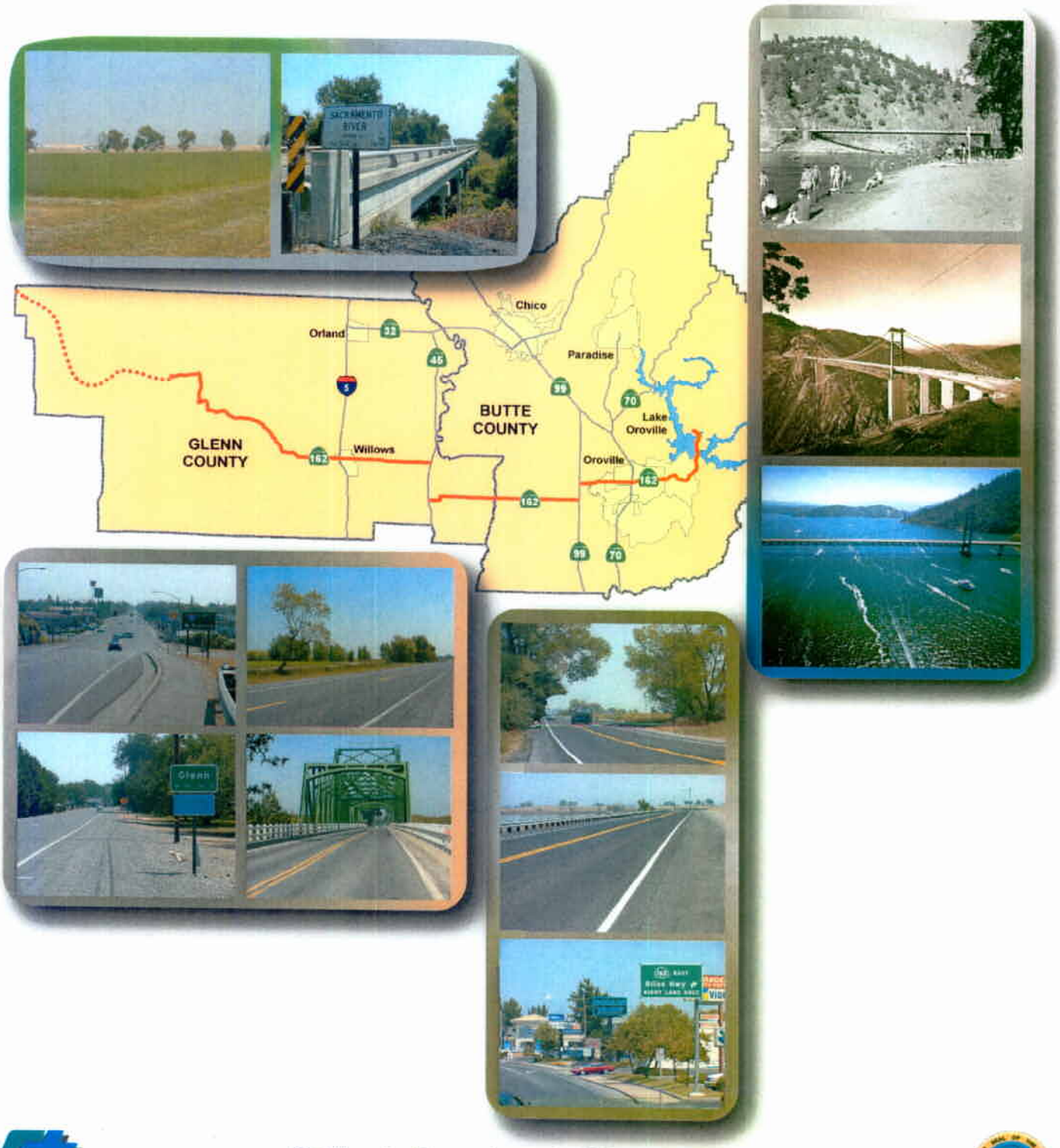
Transportation Concept Report
State Route 162

March 2004



California Department of Transportation
District 3

State Route 162

Transportation Concept Report

California Department of Transportation, District 3
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March 2004

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Deputy District Director, Planning and Local Assistance

May 18, 2004
DATE

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Introduction to the Transportation Concept Report

What is a Transportation Concept Report?

A Transportation Concept Report (TCR) is a long-term planning document that each Caltrans District prepares for every State highway, or portion thereof, in its jurisdiction, and is where long-range corridor planning in Caltrans usually begins. The purpose of a TCR is to determine how a highway will be developed and managed so that it delivers the targeted level of service and quality of operations that are feasible to attain over a twenty-year period. These are indicated in the Route Concept. (See below for a discussion of how Route Concepts are developed.)

In addition to the 20-year Route Concept, the TCR includes an Ultimate Concept, which is the ultimate goal for the route beyond the twenty-year planning horizon. Ultimate Concepts must be used cautiously, however, because unforeseen changes in land use and other variables make forecasting beyond twenty years difficult.

How does the TCR fit in with local and regional planning efforts?

As owner/operator of the State highway system, Caltrans has a duty to establish a long-range vision for its highways and determine overall strategies for their management. This is achieved by taking into consideration the numerous factors encompassed in the human and natural environments in which a particular route exists. During development of a TCR every effort is made to arrive at the same or similar level of service standard used by a local jurisdiction. Caltrans' objective is to have local, regional, private sector, and State consensus on corridor Concepts, planning strategies, and improvement priorities.

Whenever a General Plan is updated, State highways within the jurisdiction should be recognized and included in the circulation system. The jurisdiction should also adopt the Concept Level of Service (LOS) standard indicated in the TCR, along with the Concept Improvements described in the TCR as necessary to meet the Concept LOS. The jurisdiction has the option of adopting a higher LOS standard and acknowledging the inconsistency with the TCR and the associated funding participation limitations by the State for State highway improvements.

Does the TCR have to be read from cover to cover in order to get pertinent information about a route segment?

Caltrans does not intend for TCRs to be read from cover to cover as one would read a book. Rather, the TCR is a reference document with segment-specific information presented in a concise and readable format that allows the user to easily access -- in one place in the document -- all the data and information that pertains to a particular

segment of the route. Because of this format, there is a certain amount of repetition in the TCR, as information pertaining to adjacent segments of the route is repeated in the relevant sections of the TCR.
The TCR first presents an overview of the route's current condition, the general context in which it exists, and Caltrans' general vision for its future. The route is then divided into segments for analysis. Each segment's Fact Sheet contains a variety of technical, statistical, historical, and other useful information that provide a deeper understanding of the route and a context for the Concepts developed for it.

Transportation Concept Reports also include right-of-way widths, an inventory of biological resources known to exist in the vicinity of the highway, and maps showing the general location of rare species and natural communities. Right-of-way and environmental information provided in a TCR are relative to the route or route segment and are not to be considered project specific. Precise right-of-way needs cannot be defined until the appropriate environmental and engineering studies are completed. In the back of the TCR is a glossary of terms and acronyms, and a list of references used to prepare the report.

District 3 is continually striving to improve the quality and usefulness of its TCRs. Future updates will include expanded environmental information, the results of an operational analysis of heavily-congested route segments, and a corridor-level landscape or aesthetic master plan, if available, to help incorporate specific, context-sensitive features into highway projects.

Route Concept Development

A Transportation Concept Report (TCR) assesses a highway's current and future operating conditions and uses that and other information to establish a 20-year Route Concept for each segment of the route. A Route Concept is comprised of a Concept Level of Service and a description of the Concept Facility. The TCR then determines the nature and extent of improvements needed to attain the Route Concept.

Concept Level of Service

Concept Level of Service (LOS) reflects the minimum level or quality of operations that is appropriate for each route segment, and is considered to be reasonably attainable within the 20-year planning period. Caltrans also uses the Concept Level of Service as the CEQA level of significance threshold when evaluating the impacts of local development plans and projects. A significant impact is identified if a specific local development plan or project results in a level of service on the highway segment or intersection that is below the Concept LOS, and must be mitigated.

Typical Concept LOS standards in District 3 are LOS D in rural areas and LOS E in urban areas. However, some heavily congested route segments now have a Concept

LOS F because the improvements or travel demand reductions required to bring the level of service to E are not considered feasible. Level of service is established through travel forecasting data analysis, using regional models where available. (See the Glossary for a definition of Level of Service.)

Concept Facility

The description of a facility reflects its number of travel lanes, and degree of access onto the highway by local streets and driveways. (See the Glossary for an explanation of Access Control.) The Concept Facility will provide the amount of vehicle-carrying capacity necessary to achieve the Concept LOS. In some cases, people-carrying capacity will also be incorporated. Auxiliary lanes are not considered a part of the mainline roadway and, therefore, are not included in the number of travel lanes indicated in a Concept.

Concept Improvements

The range of improvements available to achieve a Route Concept is heavily influenced by environmental, political, and fiscal conditions. In many areas, planned projects are subject to meeting air quality conformity standards. Unanticipated safety projects and routine roadway maintenance are not included in Route Concept Improvements, although both will occur throughout the corridor as needed.

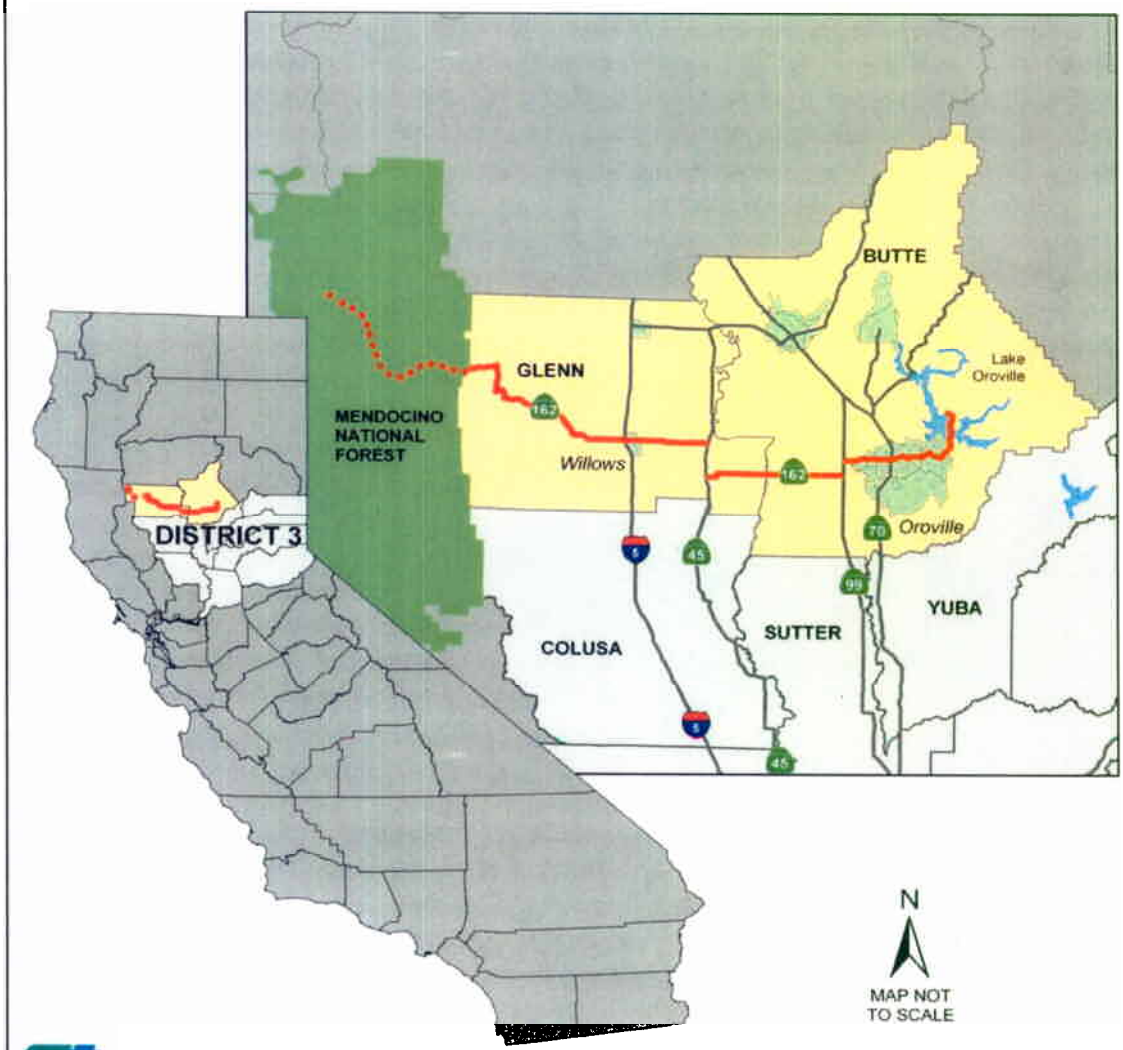
Because a highway is but one part of an interconnected transportation network, District 3 takes a corridor approach to developing TCRs. The corridor may include additional transportation systems, such as bus or rail transit service, bicycle and pedestrian facilities, heavy rail, a seaport, airports, interregional bus service, local roadways, and facilities for neighborhood electric vehicles used frequently by older citizens for local mobility. All of these systems reduce excess highway demand by providing travelers and shippers of goods with non-highway or non-driving options. Expansion of those that can provide a notable improvement to mobility within the corridor are included as Concept Improvements.

Where a Concept LOS is F, the TCR recommends general operational improvements and alternate modes of travel as starting places for further study. However, because the number of route segments with a Concept LOS F is expected to increase, operational (that is, non-capacity-increasing) improvements are now the primary strategy for optimizing the operation of the existing highway infrastructure. To fully integrate this strategy, future TCRs will include an operational analysis of heavily congested urban route segments. The results of this analysis will determine which specific operational improvements will become Concept Improvements.

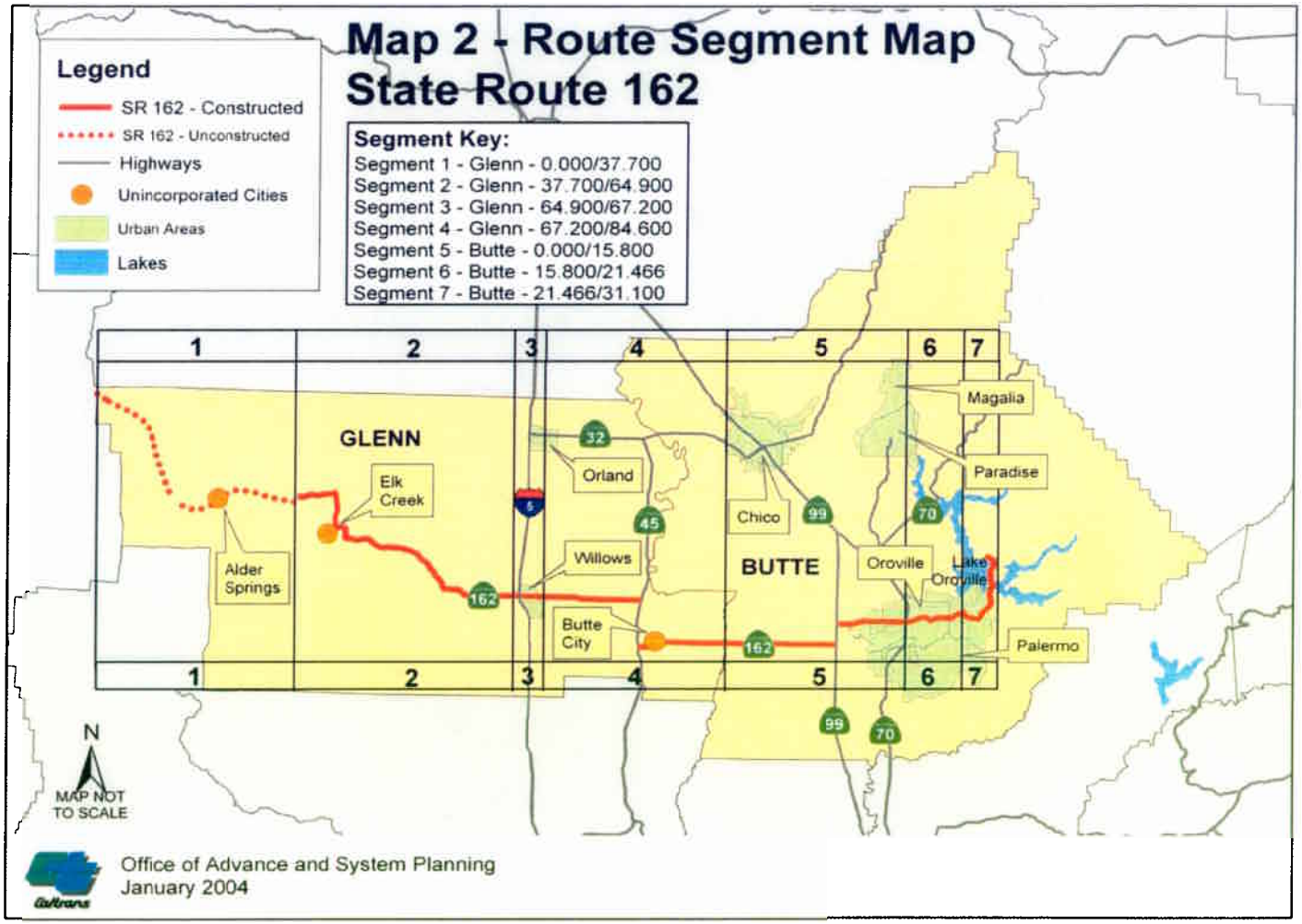
Map 1 - Route Location Map
State Route 162

Route Summary:

State Route (SR) 162 extends78 miles across Glenn and Butte Counties. It provides a west to east connection between Interstate 5 and SR 45, 70, and 99. West of I-5, SR 162 serves as a major collector road and provides access to the Mendocino National Forest. East of SR 99, SR 162 provides access to the the Greater Oroville Area and the recreation areas surrounding Lake Oroville.



Office of Advance and System Planning
January 2004


Map 2 - Route Segment Map
State Route 162
Legend
SR 162 - Constructed
SR 162 - Unconstructed
Highways
Unincorporated Cities
Urban Areas
Lakes
Segment Key:
Segment 1 - Glenn - 0.000/37.700
Segment 2 - Glenn - 37.700/64.900
Segment 3 - Glenn - 64.900/67.200
Segment 4 - Glenn - 67.200/84.600
Segment 5 - Butte - 0.000/15.800
Segment 6 - Butte - 15.800/21.466
Segment 7 - Butte - 21.466/31.100
1
2
3
4
5
6
7
GLENN
BUTTE
Elk Creek
Alder Springs
Orland
Willows
Butte City
Chico
Oroville
Lake Oroville
Magalia
Paradise
Palermo
32
45
99
70
162
N
MAP NOT TO SCALE
Office of Advance and System Planning
January 2004

Concept Rationale

In District 3, State Route (SR) 162 extends 78 miles across Glenn and Butte Counties and is legislatively designated as an Interregional Road System (IRRS) Route. Although a large portion of this route is a 2-lane conventional highway, in Willows and Oroville there are 4-lane segments. SR 162 provides a west-east connection between Interstate 5 and State Routes 45, 99, and 70. The western portion of this route serves as a major collector road and provides access to the Mendocino National Forest. Between I-5 and SR 99, SR 162 acts as a rural minor arterial, which aids in the movement of agricultural commodities along the facility. The eastern portion of this route provides recreational access to Lake Oroville and the Thermalito Afterbay.

During the next 20 years, much of SR 162 will experience very little growth, except in the Greater Oroville Area. Improvements to the facility will focus on upgrading the facility to current design standards and accommodating bicycle travel.

Within Willows, the traffic along SR 162 is expected to remain at relatively low levels during the next 20 years. Therefore, improvements within the Willows community will focus on enhancing non-motorized travel options (e.g. bicycle and pedestrian travel) and pedestrian safety.

In the Greater Oroville Area, SR 162 is expected to experience a significant level of growth. In fact, traffic in this area is expected to increase by 47 percent over the next 20 years. With this level of growth, capacity increasing solutions, intersection improvements, and strategies that maximize the efficiency of transportation resources, such as pedestrian sidewalks, bike facilities, and transit services will need to be explored.

Segment Summary

Segment 1 (Glenn County PM 0.000 – 37.000/KPM 0.000 – 60.672)

Segment 1 is a legislatively designated route with no adopted alignment. Also known as Forest Highway 7, this segment travels through the Mendocino National Forest. Maintained by Glenn County, this forest highway consists of approximately 12 miles of 2-lane conventional paved roadway and 25 miles of gravel road.

Segment 2 (Glenn County PM 37.700 – 64.900/KPM 60.672 – 104.446)

Segment 2 is a 2-lane conventional highway. This segment runs through grazing and agricultural lands between the Mendocino National Forest and Interstate 5. Approximately half of this segment is prone to flooding.

Segment 3 (Glenn County PM 64.900 – 67.200/KPM 104.446 – 108.148)

Segment 3 is a 4-lane conventional highway, which extends 2.3 miles through the city of Willows, the county seat of Glenn County. Acting as a major collector, this segment provides access to Interstate 5. Over the next 20 years, Willows is expected to experience very little population and traffic growth.

Segment 4 (Glenn County PM 67.200 – 84.600/KPM 108.148 – 136.151)

Segment 4 is a 2-lane conventional highway. This segment extends 17.4 miles from the Willows to the Glenn/Butte County line. There is a 4.5-mile break in route at SR 45. This segment is a rural minor arterial and provides truck access for moving agricultural commodities to the market. Approximately 7 miles of Segment 4 is within Federal Emergency Management Agency (FEMA) flood boundaries, and is prone to flooding during heavy rains.

Segment 5 (Butte County PM 0.000 – 15.800/KPM 0.000 – 25.428)

Segment 5 is a 2-lane conventional highway. This segment begins at the Butte/Glenn County line and ends at State Route (SR) 70. There is a 2-mile break in route at SR 99. Over the next 20 years, the areas in western Oroville (west of SR 70) will experience a significant level of growth. To adequately plan for the growth along this segment, capacity increasing solutions and strategies that maximize the efficiency of the existing transportation resources need to be explored.

West of SR 99, the land use along the route is primarily agricultural with some residential development and is expected to remain the same over the next 20 years. Approximately half of Segment 5 goes through FEMA flood boundaries, and is prone to flooding during heavy rains.

Segment 6 (Butte County PM 15.800 – 21.466/KPM 25.428 – 34.546)

Segment 6 is a 2 and 4-lane conventional highway. This segment goes through the city of Oroville, the county seat of Butte County, and the County of Butte. SR 162 is a major arterial within Oroville and provides access to the recreational areas surrounding Lake Oroville. Land uses along this segment consist of residential, retail, and business services.

Over the next 20 years, due to an influx of planned residential and non-residential development, traffic volumes in this segment will increase by approximately 47 percent, which will cause the LOS to drop from E to F. To address these future traffic volumes, between Oroville Dam Boulevard and

Oakvale Avenue, exploring capacity enhancement options, such as widening SR 162 from 2 to 4 lanes, will be necessary. In addition to widening the facility, exploring and promoting the use of other modal options, such as transit and bicycles, will help alleviate the vehicular demand on this facility.

Segment 7 (Butte County PM 21.466 – 31.100/KPM 34.546 – 50.051)

Segment 7 is a 2-lane conventional highway that provides access to Lake Oroville. This segment ends at PM 31.100, at Foreman Creek Road, just east of the lake. The road continues to the town of Quincy, in Plumas County, as Forest Highway 119.

Transportation Concept Report Summary

Table 1 – Concept Summary

Segment	County	Post Kilometer	Post Mile	Level of Service			Existing Facility*	20-Year Concept Facility*	Improvements Toward Concept Facility	Ultimate Facility
				2000	2020 No Build	Concept				
1	Glenn	0.000/ 60.672	0.000/ 37.700	-	-	-	-	-	• UNCONSTRUCTED ROUTE	-
2	Glenn	60.672/ 104.446	37.700/ 64.900	B	B	D	2C	2C	• Widen shoulders to 8 feet. • Consider a Class III Bike facility (bike route) throughout segment.	2C
3	Glenn (Willows)	104.446/ 108.148	64.900/ 67.200	A	A	D	2/4C	2/4C	• Consider a Class II Bike facility (bike lane) throughout segment. • Install decorative lighting and street landscaping. • Add 2 sidewalks or a pedestrian path between the SR 162/I-5 Separation Overpass and Wal-Mart. • Improve pedestrian access from the west to the east side of I-5.	2/4C
4	Glenn	108.148/ 136.151	67.200/ 84.600	B	C	D	2C	2C	• Widen shoulders to 8 feet. • Consider a Class III Bike facility (bike route) throughout segment.	2C
5	Butte (Oroville)	0.000/ 25.428	0.000/ 15.800	E	F	D	2C	2/4C	• From Wilbur Road to SR 70, widen from 2 to 4 lanes. • Support an increase in fixed-route transit services along the segment. • Within Oroville, provide pedestrian sidewalks. • Widen shoulders to 8 feet. • From SR 99 to SR 70, consider a Class II Bike facility (bike lane). • Outside the Greater Oroville Area, consider a Class III Bike facility (bike route).	2/4C

Transportation Concept Report Summary

Table 1 – Concept Summary (Continued)

Segment	County	Post Kilometer	Post Mile	Level of Service			Existing Facility*	20-Year Concept Facility*	Improvements Toward Concept Facility	Ultimate Facility
				2000	2020 No Build	Concept				
6	Butte (Oroville)	25.428/ 34.546	15.800/ 21.466	E	F	E	2/4C	4C	• From Oroville Dam Blvd Oakvale Ave (PM 20.739), widen from 2 to 4 lanes. • Widen shoulders to 8 feet. • Implement operational improvements at the intersection of Oroville Dam Blvd and Olive Highway. • Support an increase in transit services along segment. • Consider a Class II Bike facility (bike lane) throughout segment or between SR 70 and Olive Highway. • Consider continuous sidewalks from SR 70 to Foothill Boulevard. • Support improvements such as decorative lighting and street landscaping.	4C
7	Butte (Oroville)	34.546/ 50.051	21.466/ 31.100	E	E	D	2C	2C	• Widen 40-foot standard throughout segment, where appropriate. • Signalize intersection of Kelly Ridge Road/Miners Ranch Road and SR 162, and add left turn lanes in west and eastbound directions. • Construct truck climbing lanes: westbound (Kelly Ridge Road/Miners Ranch Road towards Canyon Drive); and eastbound (Kelly Ridge Road/Miners Ranch Road towards Forbestown Road). • Add a left turn pocket at Forbestown Road in the westbound direction. • Support an increase in fixed route transit services along the segment.	2C

* Facility Types: 2C = 2-Lane Conventional Highway; 4C = 4-Lane Conventional Highway

District 3 - Transportation Concept Report Fact Sheet

Route Information

Route:	162
County:	Glenn
Segment Number:	1

Segment Boundaries

KP Ahead	0.000	**PM Ahead**	0.000
KP Back	60.672	**PM Back**	37.700
Distance [km]	60.672	**Distance [mi]:**	37.700

Segment Description

From the Mendocino/Glenn county line to eastern edge of the Mendocino National Forest

Concept Summary

Existing Facility:

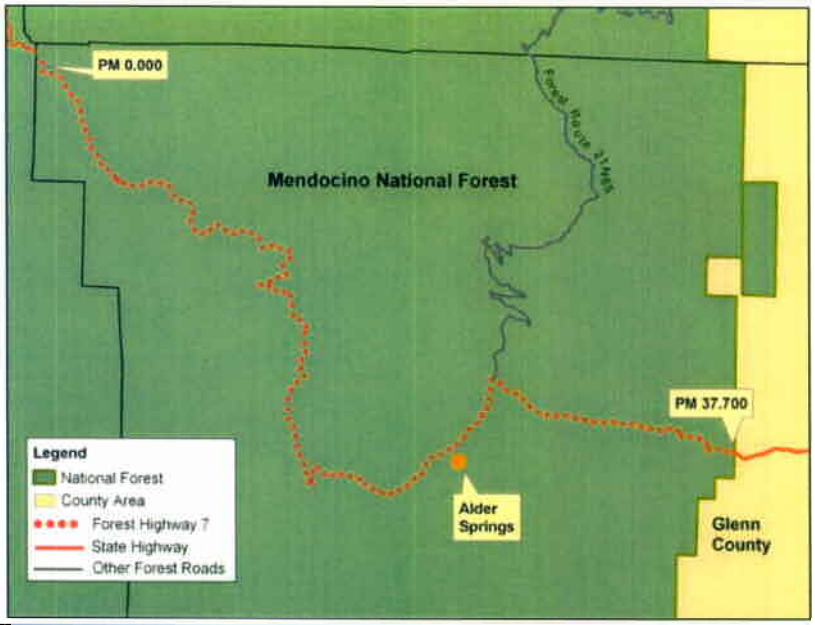
Unconstructed/Not Adopted

Concept Facility:

Unconstructed/Not Adopted

Ultimate Facility:

2C



Level of Service (LOS)

Existing LOS:	N/A	County General Plan:	Glenn
20 yr. LOS - No Build:	N/A	General Plan Year:	1992
20 yr. Concept LOS:	N/A	General Plan LOS Standard:	D

Main Street Communities

Community Name:	General Plan Year:	General Plan LOS Standard:
Not a Main Street		

TRANSPORTATION CONCEPT IMPROVEMENTS

- No route concept has been defined; however, the Ultimate Concept is a 2-lane conventional highway (to be constructed some time beyond the 20-year planned horizon).

DESCRIPTION - RATIONALE - GENERAL COMMENTS

Segment 1 is a legislatively-designated route with no adopted alignment. Known as Forest Highway (FH) 7, this segment goes through the Mendocino National Forest. Maintained by Glenn County, this forest highway consists of approximately 12 miles of 2-lane paved roadway and 25 miles of unpaved road.

There are no current plans to adopt an alignment, and improve or develop this segment during the next 20 years; therefore, no route concept has been defined. In order to construct this route,

a route adoption study and environmental impact statement/environmental impact report will to required to determine the exact alignment. The unpaved portion of this segment would need to be upgraded to meet the minimum design standards of a 2-lane conventional highway (see design standards in Appendix A).

Glenn County and the City of Willows support the adoption of Forest Highway 7 and construction of a 2-lane conventional highway. These actions will enhance the connection between Mendocino and Glenn Counties by providing other east-west link between Interstate 5 and US 101 for long haul truckers and the traveling public. Willows and Covelo (located in Mendocino County) would benefit economically with the construction of a 2-lane conventional highway on this segment.

LAND USE

This portion of Route 162 consists of agricultural land uses in the last few miles of the segment and federally-protected forest land in the Mendocino National Forest (see Appendix D).

MODAL OPTIONS

None.

RIGHT OF WAY

None.

Functional Classification Information

Functional Classification:	**Major Collector**
National Highway System (NHS):	**Non NHS**
Access Control:	
National Truck System:	**1**
Scenic Route:	**{7F675DB0-340B-11D5-B4DB-001**
Lifeline Route:	**0**
Statewide Significance:	**0**

Highway Log Right of Way Information

Number of Lanes: 2

	Meters	*Feet*
Avg. Lane Width:		
Avg. Shoulder Width:	0.00	0.00
Avg. Median Width:	0.00	0.00

General Comments:

Approximately 12 miles of the segment is paved while the other 25 miles is unpaved.

Projects Planned (Non-funded)

NO PROJECTS PLANNED

Projects Programmed (Funded)

NO PROJECTS PROGRAMMED

Traffic Data

Peak Period Direct Split:

% Traffic Growth Per Year:

Land-Use Data

Land Use Zone: National Forest

Terrain: Mountainous

Future-20yr. Land Use: National Forest

Traffic Analysis

Year	AADT	PkHrVol	V/CRatio	LOS	Comments
					No existing traffic counts

Collision Rates

Total Collision Rate:

Compares the actual segment collision rate with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Fatality-plus-Injury Collision Rate:

Compares the actual fatality-plus-injury rates with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Truck Volumes

	Daily Truck Volumes		% Trucks of Truck AADT	% Trucks of Total AADT
3 Axle		3 Axle		
4 Axle		4 Axle		
5+ Axle		5+ Axle		
Total:		Total:		

Air Quality

The following information is a brief overview only. For specific environmental information, contact California Department of Transportation District 3 Environmental Offices.

Air Basin: Sacramento Valley

Federal Air Quality Area Designations:

CO: Attainment/Unclassified **PM10:** Unclassified/Attainment **Ozone:** Attainment/1 hr. std. not applicable

Local and Regional Planning Agencies

RTPA/MPO

Glenn County Transportation Commission
P.O. Box 1070
Willows, CA 95988-2298
(530) 934-6530

Air Quality District

Glenn County Air Pollution Control District
P.O. Box 351 (720 N. Colusa St.)
Willows, CA 95988-0351
(530) 934-6500

County Planning Department

County of Glenn
Glenn County Resource Planning and Development Department
125 S. Murdock Ave.
Willows, CA 95988
(530) 934-6540

Congestion Management Agency

No CMA in County

City Planning Department

No incorporated city governments along segment

District 3 - Transportation Concept Report Fact Sheet

Route Information

Route:	162
County:	Glenn
Segment Number:	2

Segment Boundaries

KP Ahead	60.672	**PM Ahead**	37.700
KP Back	104.446	**PM Back**	64.900
Distance [km]	43.774	**Distance [mi]:**	27.200

Segment Description

From the eastern end of the Mendocino National Forest to the western city limit of Willows

Concept Summary

Existing Facility:

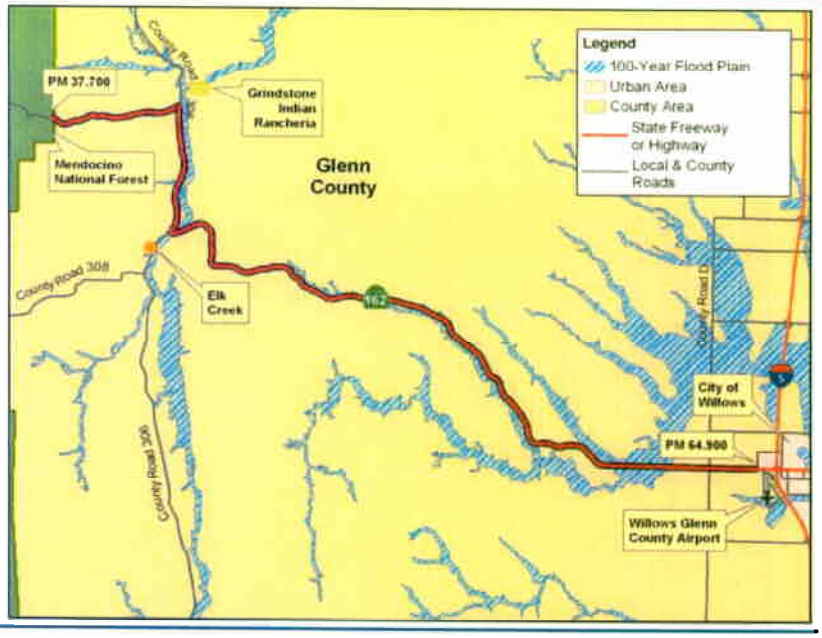
2-Lane Conventional

Concept Facility:

2-Lane Conventional

Ultimate Facility:

2-Lane Conventional



Level of Service (LOS)

Existing LOS:	B
20 yr. LOS - No Build:	B
20 yr. Concept LOS:	D

County General Plan:	Glenn
General Plan Year:	1992
General Plan LOS Standard:	D

Main Street Communities

Community Name:	General Plan Year:	General Plan LOS Standard:
Not a Main Street		

TRANSPORTATION CONCEPT IMPROVEMENTS

- Widen shoulders to 8-foot standard.

- Provide a Class III Bike facility (bike route) throughout segment.

DESCRIPTION - RATIONALE - GENERAL COMMENTS

Segment 2 of State Route (SR) 162 travels through grazing and agricultural areas between the Mendocino National Forest and Interstate 5.

Currently, the Annual Average Daily Traffic (AADT) for this segment is 2,150 with a Level-of-Service (LOS) of B. Over the next 20 years, this traffic volume is expected to reach approximately 2,680 per day, and will continue to operate at LOS B.

To permit sufficient shared roadway use between motorists and bicyclists, the shoulders for this segment will need to be widened. The current standard for outside shoulders on a 2-lane undivided conventional highway is 2.4 meters or approximately 8 feet. The average shoulder width for Segment 2 is less than 1 meter or 3.3 feet. Once the shoulders are widened to meet current design standards, signs should be posted at various locations to indicate that the segment is a Class III Bike Facility (bike route).

Although the Draft 1997 Glenn County Bike Plan identifies a planned Class II Bikeway (bike lane) on SR 162 west of Willows, the California Department of Transportation supports a Class III Bikeway. The land-use patterns along this segment will not generate enough bike travel to justify the addition of a bike lane. However, designating this segment as a bike route will promote travel between the Mendocino National Forest and Willows, and provide an alternative to the automobile.

The portion of the roadway between PM 60.500 and 64.900, is prone to flooding. Areas between PM 61.1 and 62.4, as well as other areas, are within the Federal Emergency Management Agency (FEMA) Zone A Flood Boundaries (i.e. 100 year flood plain). According the historical data, during heavy rains, some areas of the roadway flood with anywhere from 1 to 36 inches of water. When flooding prevents travel, Caltrans maintenance crews close the impacted areas until conditions improve.

The Grindstone Indian Rancheria is located northeast of SR 162 and County Road 306. This is a federally-recognized reservation of the Nomlaki and Wintun Indians, which is located about six miles from the small town of Elk Creek City. The total area of the reservation is 120 acres. Population of the reservation is 98, and tribal enrollment is 162.

LAND USE

From the eastern end of the Mendocino National Forest to the city limit of Willows, land use is primarily agricultural with some rural residential development.

MODAL OPTIONS

BICYCLES: Currently, there are no existing Class II or III Bike facilities on SR 162. However, bicyclists are permitted to use the roadway (i.e. shared roadway).

TRANSIT: Currently, no transit service is available on this segment.

RIGHT OF WAY

Right of way along the facility varies between 18.29 and 30.48 meters (approximately 60 to 100 feet). There is sufficient right of way to support the concept improvements.

Functional Classification Information

Functional Classification:	**Major Collector**
National Highway System (NHS):	**Non NHS**
Access Control:	**Conventional Highway**
National Truck System:	**Non National Truck System**
Scenic Route:	**Non Scenic**
Lifeline Route:	**Non Lifeline**
Statewide Significance:	**Non Interregional Route System**

Highway Log Right of Way Information

Number of Lanes: 2

	Meters	*Feet*
Avg. Lane Width:	3.66	12.00
Avg. Shoulder Width:	0.61	2.00
Avg. Median Width:	0.00	0.00

General Comments:

Projects Planned (Non-funded)

1997 Draft Glenn County Bicycle Plan	Class II Bike lane along State Highway 162, west of the City of Willows (connection with other communities)

Projects Programmed (Funded)

NO PROJECTS PROGRAMMED

Traffic Data

Peak Period Direct Split:	60%
% Traffic Growth Per Year:	1%

Land-Use Data

Land Use Zone: Agricultural/Residential

Terrain: Rolling

Future-20yr. Land Use: Agricultural/Residential

Traffic Analysis

Year	AADT	PkHrVol	V/CRatio	LOS	Comments
2000	2,150	210	0.13	B	None
2010	2,420	230	0.14	B	None
2020	2,680	260	0.16	B	None

Collision Rates

Total Collision Rate: 0.47

Compares the actual segment collision rate with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Fatality-plus-Injury Collision Rate: 0.41

Compares the actual fatality-plus-injury rates with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Note: Represents collision data from April 1998 to March 2001

Truck Volumes

	Daily Truck Volumes
3 Axle	74
4 Axle	49
5+ Axle	49
Total:	172

	% Trucks of Truck AADT	% Trucks of Total AADT
3 Axle	21.4%	3.4%
4 Axle	14.3%	2.3%
5+ Axle	14.3%	2.3%
Total:	50.0%	8.0%

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CO: Attainment/Unclassified **PM10:** Unclassified/Attainment **Ozone:** Attainment/1 hr. std. not applicable

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District 3 - Transportation Concept Report Fact Sheet

Route Information

Route:	162
County:	Glenn
Segment Number:	3

Segment Boundaries

KP Ahead	104.446	**PM Ahead**	64.900
KP Back	108.148	**PM Back**	67.200
Distance [km]	3.701	**Distance [mi]:**	2.300

Segment Description

From the western to the eastern City Limits of Willows

Concept Summary

Existing Facility:

2-Lane Conventional from westen city limit to I-5; 4-Lane Conventional from I-5 to Tehama Street; and 2-Lane Conventional from Tehama Street to city/county line

Concept Facility:

2-Lane Conventional from westen city limit to I-5; 4-Lane Conventional from I-5 to Tehama Street; and 2-Lane Conventional from Tehama Street to city/county line

Ultimate Facility:

2-Lane Conventional from westen city limit to I-5; 4-Lane Conventional from I-5 to Tehama Street; and 2-Lane Conventional from Tehama Street to city/county line

Level of Service (LOS)

Existing LOS:	A
20 yr. LOS - No Build:	A
20 yr. Concept LOS:	D

County General Plan:	Glenn
General Plan Year:	1992
General Plan LOS Standard:	D

Main Street Communities

Community Name:	General Plan Year:	General Plan LOS Standard:
Willows	1996	D

TRANSPORTATION CONCEPT IMPROVEMENTS

- Provide a Class II Bike facility (bike lane) throughout segment.

- Add decorative lighting, street landscaping, and other traffic calming measures to enhance the appearance and promote safety on the segment (See alternatives identified in the "Description - Rationale - General Comments" section).

- Add a sidewalk or pedestrian path between the SR 162/I-5 Separation Overpass and Wal-Mart.

- Improve pedestrian access from the west to the east side of I-5.

DESCRIPTION - RATIONALE - GENERAL COMMENTS

Segment 3 is a 2 and 4-lane conventional highway that extends 2.3 miles through the city of Willows, the county seat of Glenn County. This segment is a major collector within Willows and provides access to Interstate 5. From the I-5 overpass to the eastern city limits, there are three signalized intersections. Between I-5 and the railroad tracks, there are continuous sidewalks on both sides of the street. On-street parking is permitted on various portions of the facility.

According to the California Department of Finance, in 2001, Willows had a population of 6,275. With a current annual average growth rate of 2.1 percent, by 2011, the 1996 City of Willows General Plan states that the City is expected to have a population of 7,760.

In the year 2000, the Average Annual Daily Traffic (AADT) for this segment was 7,600 vehicles. Increasing at an estimated rate of 1 percent per year, over the next 20 years, the AADT is expected to reach approximately 9,500 vehicles per day. The facility is expected to continue operating at Level-of-Service (LOS) A.

Pedestrian access between the east and west side of the I-5 separation overpass on westbound SR 162 should be improved. On the northwest side of the overpass is Wal-Mart, which many residents of Willows walk to. However, the majority of residents live on the east side of I-5. There is currently a sidewalk on the east side of I-5 adjacent to westbound SR 162; however, the sidewalk ends at the overpass. Pedestrians must cross SR 162 to access a sidewalk on the south side of the highway but in order to do so, must also go across the overpass, cross an offramp, and two onramps. There is a sidewalk in front of Wal-Mart but it is isolated and does not connect to any other pedestrian facility along SR 162.

As the west side of Willows develops, the issue of improving pedestrian access will need to be addressed by the City. Specific improvements west of I-5 on SR 162 can include installing a traffic signal at the Wal-Mart entrance and Airport Road; and incorporating crosswalks, sidewalks, bike lanes, and street landscaping. Improvements to SR 162/I-5 separation overpass can include adding 5-foot sidewalks and bike lanes on each side on the structure.

Wal-Mart plans to expand and convert its existing store of 86,453 square feet to a Wal-Mart Superstore with 187,348 square feet. More than doubling in size, the proposed expansion will generate more traffic along SR 162; however, to date, no studies that specifically identify the traffic impacts the Superstore will have on SR 162 have been completed. The project's environmental impact report (EIR) should identify these traffic impacts and appropriate mitigation. Improvements should include capacity enhancements to SR 162 west of the SR 162/I-5 interchange, a traffic signal, and improved pedestrian access to the Superstore.

Operational improvements, including improved signage, to the intersection of SR 162 and North Humboldt Avenue are also needed. SR 162 has 4 lanes east and 2 lanes west of the intersection. Motorists traveling westbound through the intersection encounter an outside through lane that immediately becomes an enter-only onramp for I-5 North. The inside through lanes proceeds over the SR 162/I-5 Separation Overpass towards Wal-Mart and the I-5 South onramp. Signage at this location does not provide motorists adequate notice that the lanes become onramps. Therefore, motorists frequently make last minute or unanticipated lane changes. To address this problem, signage that alerts motorists of the impending onramp

should be provided.

The Draft 1997 Glenn County Bike Plan identifies a Class II Bike facility on SR 162 within Willows, stating that this will "encourage and accommodate safe and efficient bicycle use within Glenn County." Caltrans supports this improvement.

Other recommended improvements include street landscaping, decorative lighting, community identifiers, site furnishings, on-street parking bulbouts, enhanced paving treatments, and raised planters. These elements will create a sense of place while helping drivers recognize they are entering an area of increased pedestrian and bicycle activity.

Many residents believe that the roadway, with 4 lanes and on-street parking, is too wide and divides the community in half. Others are concerned about speeding vehicles traveling next to the high school, which is located on the south side of SR 162 between Merrill and Marshall Avenues. Since crosswalks are only located at signalized intersections, this particular issue has sparked concerns about students from the north side of the community safely crossing the street to get to school. Four possible options for alleviating some of these concerns are to implement traffic-calming measures, reduce the number of lanes (lane reduction), or use a combination of traffic calming and lane reduction measures.

Traffic calming measures may include the existing 4 12-foot lanes; a continuous 10-foot planter strip/streetscape and 5-foot sidewalk on each side of the roadway; and crosswalks at each intersection (See Appendix G for design concepts). These improvements will encourage slower speeds, reduce the distance for crossing the street, and enhance the appearance of SR 162.

A different set of traffic calming measures may include the existing 4 12-foot lanes; an 8-foot raised median with decorative paving and planting (without trees); a 6-foot planter strip parkway and 5-foot sidewalk on each side of the roadway; and crosswalks at each intersection (See Appendix H for design concepts). These improvements will encourage slower speeds, reduce the walking distance and provide a pedestrian refuge for crossing the street, and enhance the appearance of SR 162.

A third option is to use a combination of traffic calming and lane number reduction measures. This may include providing 2 12-foot lanes, 12-foot raised median with decorative paving and planting (with trees), and bulbouts at each corner with site furnishings and crosswalks. In addition, 9-foot parallel parking, 6-foot planter strip parkway, and 6-foot sidewalks on each side of the roadway would be included in this scenario (See Appendix I for design concepts). These improvements will encourage slower speeds, smooth traffic flow, reduce collisions, reduce the walking distance and provide a pedestrian refuge for crossing the street, and enhance the overall image of SR 162. With these improvements, this segment would operate at an acceptable LOS C 20 years.

The fourth option also uses traffic calming and lane number reduction measures. This would include providing 2 12-foot lanes; an 8-foot raised median with decorative paving and planting (without trees); a 5-foot lane (Class II Bike Facility), 5-foot planter strip parkway, and 5-foot sidewalk on each side of the roadway; and bulbouts at each corner with site furnishings and crosswalks. This scenario will encourage slower speeds, smooth traffic flow, reduce collisions, reduce the walking distance and provide a pedestrian refuge for crossing the street, and enhance the overall image of SR 162. Providing bike lanes will benefit students commuting to school and residents that do not own automobiles. More importantly, as development increases along SR 162, especially west of I-5, bike lanes will offer residents an alternative to the automobile.

The aforementioned options are concepts that are intended to initiate discussion and provide general ideas that can be pursued. Any future improvements should be based on a well-planned master design concept or landscape master plan that defines the community's goals, concerns, visions, and values.

Willows Glenn Airport, located at PM 65.350 on the south side of SR 162, provides services to the business and agricultural community and disaster/emergency services. Since this airport will experience very little growth over the next 20 years, ground access via SR 162 will be adequate.

LAND USE

The land use along Segment 3 consist of suburban residential, commerical, retail services, and an airport. These land uses are expect to remain the same over the next 20 years.

MODAL OPTIONS

GLENN RIDE TRANSIT SERVICE: Glenn Ride offers fixed route transit service for Willows, Artois, Orland, Hamilton City, and Chico (in Butte County). The service offers 7 trips per weekday. Of these 7 trips, 2 are express routes. During the weekend, the service offers 3 trips. There are 3 bus stops on Segment 3 which are located at Colusa Street, Sacramento Street, and the west side of the Wal-Mart store. For more information, call (888) 800-RIDE (7433).

GREYHOUND LINES, INC.: Greyhound Lines, Inc. makes 2 daily stops at Wal-Mart, which is located at 470 North Airport Avenue in Willows (PM 65.350). For more information on bus tickets or schedules, call (800) 229-9424.

WILLOWS GLENN COUNTY AIRPORT: The airport primarily serves Glenn County. It provides services to businesses, the agricultural community, and disaster/emergency services. WILLOWS GLENN COUNTY AIRPORT, SR 162 and I-5, Willows, CA 95988, (530) 934-6530.

BICYCLES: Currently, there are no existing Class II or III Bike facilities on SR 162. However, since bicyclists are permitted to use the roadway, this segment is designated as a shared roadway.

PEDESTRIAN TRAVEL: On the eastern portion of the segment, 1.5-meter (approximately 4.9 feet) walkways or sidewalks are located on each side of the roadway. On the State Route 162/I-5 Separation Overpass, there is one 1.5-meter sidewalk on the south side of the roadway. To the west of the separation overpass, there is one 1.5-meter pedestrian sidewalk in the front of Wal-Mart (located on the north side of the segment).

RIGHT OF WAY

Right of way varies between 17.07 and 24.38 meters (approximately 56 to 80 feet). There is sufficient right of way to support the concept improvements and the various alternatives discussed in "Discription - Rationale - General Comments" section.

Functional Classification Information

Functional Classification:	**Major Collector**
National Highway System (NHS):	**Non NHS**
Access Control:	**Conventional Highway**
National Truck System:	**Non National Truck System**
Scenic Route:	**Non Scenic**
Lifeline Route:	**Non Lifeline**
Statewide Significance:	**Non Interregional Route System**

Highway Log Right of Way Information

Number of Lanes: 2

	Meters	*Feet*
Avg. Lane Width:	4.88	16.00
Avg. Shoulder Width:	1.22	4.00
Avg. Median Width:	0.00	0.00

General Comments:

Projects Planned (Non-funded)

NO PROJECTS PLANNED

Projects Programmed (Funded)

NO PROJECTS PROGRAMMED

Traffic Data

Peak Period Direct Split:	56%
% Traffic Growth Per Year:	1%

Land-Use Data

Land Use Zone: Commercial/Residental/Industrial

Terrain: Flat

Future-20yr. Land Use: Commercial/Residental/Industrial

Traffic Analysis

Year	AADT	PkHrVol	V/CRatio	LOS	Comments
2000	7,790	660	0.11	A	None
2010	8,740	740	0.13	A	None
2020	9,690	820	0.14	A	None

Collision Rates

Total Collision Rate: 1.6

Compares the actual segment collision rate with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Fatality-plus-Injury Collision Rate: 1.76

Compares the actual fatality-plus-injury rates with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Note: Represents collision data from April 1998 to March 2001

Truck Volumes

	Daily Truck Volumes
3 Axle	118
4 Axle	74
5+ Axle	191
Total:	382

	% Trucks of Truck AADT	% Trucks of Total AADT
3 Axle	12.9%	1.5%
4 Axle	8.1%	1.0%
5+ Axle	21.0%	2.5%
Total:	41.9%	5.0%

Air Quality

The following information is a brief overview only. For specific environmental information, contact California Department of Transportation District 3 Environmental Offices.

Air Basin: Sacramento Valley

Federal Air Quality Area Designations:

CO: Attainment/Unclassified **PM10:** Unclassified/Attainment **Ozone:** Attainment/1 hr. std. not applicable

Local and Regional Planning Agencies

RTPA/MPO

Glenn County Transportation Commission
P.O. Box 1070
Willows, CA 95988-2298
(530) 934-6530

Air Quality District

Glenn County Air Pollution Control District
P.O. Box 351 (720 N. Colusa St.)
Willows, CA 95988-0351
(530) 934-6500

County Planning Department

County of Glenn
Glenn County Resource Planning and Development Department
125 S. Murdock Ave.
Willows, CA 95988
(530) 934-6540

Congestion Management Agency

No CMA in County

City Planning Department

City of Willows
Willows City Planning Department
Box 864
Willows, CA 95988
(530) 934-7041

District 3 - Transportation Concept Report Fact Sheet

Route Information

Route:	162
County:	Glenn
Segment Number:	4

Segment Boundaries

KP Ahead	108.148	**PM Ahead**	67.200
KP Back	136.151	**PM Back**	84.600
Distance [km]	28.003	**Distance [mi]:**	17.400

Segment Description

From the eastern city limits of Willows to the Glenn/Butte County line. There is a break in route at State Route 45.

Concept Summary

Existing Facility:

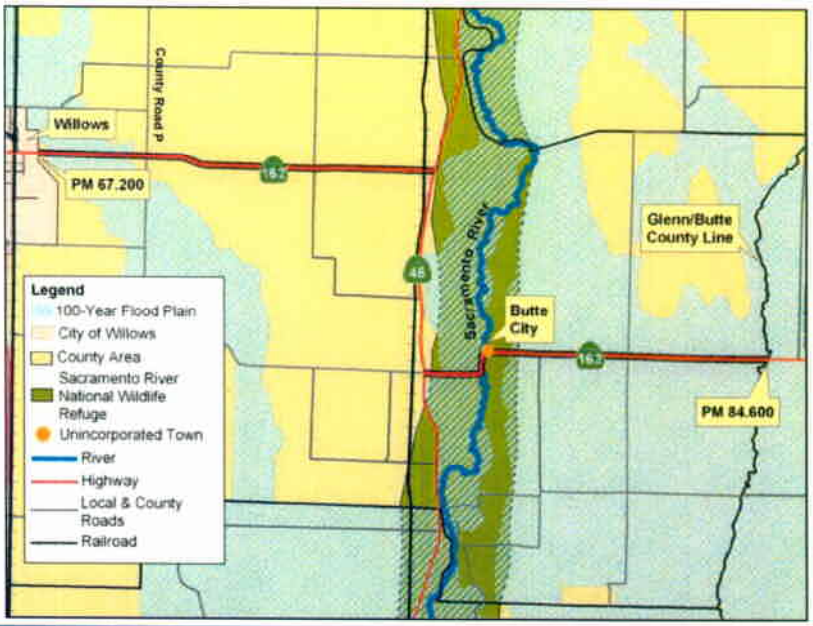
2-Lane Conventional

Concept Facility:

2-Lane Conventional

Ultimate Facility:

2-Lane Conventional



Level of Service (LOS)

Existing LOS:	B
20 yr. LOS - No Build:	C
20 yr. Concept LOS:	D

County General Plan:	Glenn
General Plan Year:	1992
General Plan LOS Standard:	D

Main Street Communities

Community Name:	General Plan Year:	General Plan LOS Standard:
Glenn		
-Unincorporated - Refer to county general plan for LOS standard		
Butte City		
-Unincorporated - Refer to county general plan for LOS standard		

TRANSPORTATION CONCEPT IMPROVEMENTS

- Widen shoulders to 8-foot standard.

- Provide a Class III Bike facility (bike route) throughout segment.

DESCRIPTION - RATIONALE - GENERAL COMMENTS

Segment 4 is a 2-lane conventional highway that extends 17.4 miles from Willows to the Butte County line. There is a 4.5 mile break in route on State Route 45 at PM 76.270.

Currently, the Annual Average Daily Traffic (AADT) for this segment is 2,940 with a Level of Service (LOS) B. Over the next 20 years, the traffic volume is expected to reach approximately 4,810 per day with LOS C.

To permit sufficient shared roadway use between motorists and bicyclists, the shoulders for this segment will need to be widened. The current standard for outside shoulders on a 2-lane undivided conventional highway is 2.4 meters or approximately 8 feet. The average shoulder width for Segment 4 is less than 1.5 meters or 5 feet. Once the shoulders are widened to meet current design standards, signs should be posted at various locations to indicate that the segment is a Class III Bike Facility (bike route).

Although the Draft 1997 Glenn County Bike Plan identifies a planned Class II Bikeway (bike lane) on SR 162 east of Willows, the California Department of Transportation supports a Class III Bikeway. The land-use patterns along this segment will not generate enough bike travel to justify the addition of a bike lane. However, designating this segment as a bike route will promote travel between Willows and Oroville, and provide an alternative to the automobile.

Throughout this segment are areas within Zone A Flood Boundaries (i.e. 100-year flood plain) as designated by the Federal Emergency Management Agency (FEMA). These areas are: PM 67.5 to 69.3, PM 76.7 to 78.0, and PM 80.7 to 84.6. During heavy rains, these areas can flood with up to 36 inches of water. The flooding normally occurs between the Glenn Colusa Canal (just east of Willows) and an area just west of County Road P. Under Title 23 of the California State Water Code, the areas east of Butte City are designated as floodways because they act as a catchment area for the overflow from the Sacramento River. When flooding prevents travel, Caltrans maintenance crews close the facility at the high ground on both sides of the flooding until the conditions improve.

LAND USE

On the western-most portion of this segment, just outside the city limit of Willows, land uses are as follows: public, intensive agriculture, industrial, and single family residential. A cemetery is located on the southern side of the segment.

From Willows to east of SR 45, before entering Butte City, much of the land is agricultural. Within Butte City, the current land uses are single family residential, industrial, and community commercial.

The Sacramento River National Wildlife Refuge (SRNWR) is located between SR 45 and the east side of Butte City (PM 76.5 to 78.8). Established in 1989, this refuge stretches 77 miles along the Sacramento River and consists of 11,213 acres of land (as of January 2000) in Tehama, Butte, and Glenn Counties. According to SRNWR, the refuge helps to "preserve, restore, and enhance riparian habitat for threatened and endangered species, songbirds, waterfowl, other migratory birds, migratory fish, resident riparian wildlife, and plants." (See Appendix D)

From Butte City to the Glenn/Butte County line, the land uses are primarily agriculture.

MODAL OPTIONS

BICYCLES: Currently, there are no existing Class II or III Bike facilities on SR 162. However, since bicyclists are permitted to use the roadway, this segment is designated as a shared

roadway.

TRANSIT: Currently, no transit service is available on this segement.

RIGHT OF WAY

Right of way varies between 18.29 and 35.05 meters (approximately 60 to 115 feet). There is sufficient right of way to support the concept improvements.

Functional Classification Information

Functional Classification:	**Minor Arterial**
National Highway System (NHS):	**Non NHS**
Access Control:	**Conventional Highway**
National Truck System:	**Non National Truck System**
Scenic Route:	**Non Scenic**
Lifeline Route:	**Non Lifeline**
Statewide Significance:	**Non Interregional Route System**

Highway Log Right of Way Information

Number of Lanes: 2

	Meters	*Feet*
Avg. Lane Width:	3.96	13.00
Avg. Shoulder Width:	1.52	5.00
Avg. Median Width:	0.00	0.00

General Comments:

Projects Planned (Non-funded)

1997 Draft Glenn County Bicycle Plan	Class II Bike lane along State Highway 162, east of the City of Willows (connection with other communities)

Projects Programmed (Funded)

NO PROJECTS PROGRAMMED

Traffic Data

Peak Period Direct Split:	60%
% Traffic Growth Per Year:	3%

Land-Use Data

Land Use Zone: Agriculture/Commercial/Residential

Terrain: Flat

Future-20yr. Land Use: Agriculture/Commercial/Residential

Traffic Analysis

Year	AADT	PkHrVol	V/CRatio	LOS	Comments
2000	2,940	300	0.17	B	None
2010	3,870	390	0.22	B	None
2020	4,810	490	0.27	C	None

Collision Rates

Total Collision Rate: 0.42

Compares the actual segment collision rate with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Fatality-plus-Injury Collision Rate: 0.3

Compares the actual fatality-plus-injury rates with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Note: Represents collision data from April 1998 to March

Truck Volumes

	Daily Truck Volumes
3 Axle	38
4 Axle	25
5+ Axle	189
Total:	252

	% Trucks of Truck AADT	% Trucks of Total AADT
3 Axle	10.7%	1.3%
4 Axle	7.1%	0.9%
5+ Axle	53.6%	6.4%
Total:	71.4%	8.6%

Air Quality

The following information is a brief overview only. For specific environmental information, contact California Department of Transportation District 3 Environmental Offices.

Air Basin: Sacramento Valley

Federal Air Quality Area Designations:

CO: Attainment/Unclassified **PM10:** Unclassified/Attainment **Ozone:** Attainment/1 hr. std. not applicable

Local and Regional Planning Agencies

RTPA/MPO

Glenn County Transportation Commission
P.O. Box 1070
Willows, CA 95988-2298
(530) 934-6530

Air Quality District

Glenn County Air Pollution Control District
P.O. Box 351 (720 N. Colusa St.)
Willows, CA 95988-0351
(530) 934-6500

County Planning Department

County of Glenn
Glenn County Resource Planning and Development Department
125 S. Murdock Ave.
Willows, CA 95988
(530) 934-6540

Congestion Management Agency

No CMA in County

City Planning Department

No incorporated city governments along segment

District 3 - Transportation Concept Report Fact Sheet

Route Information

Route:	162
County:	Butte
Segment Number:	5

Segment Boundaries

KP Ahead	0.000	**PM Ahead**	0.000
KP Back	25.428	**PM Back**	15.800
Distance [km]	25.428	**Distance [mi]:**	15.800

Segment Description

From the Glenn/Butte County line to State Route 70 in Oroville. There is a break in route at State Route 99.

Concept Summary

Existing Facility:

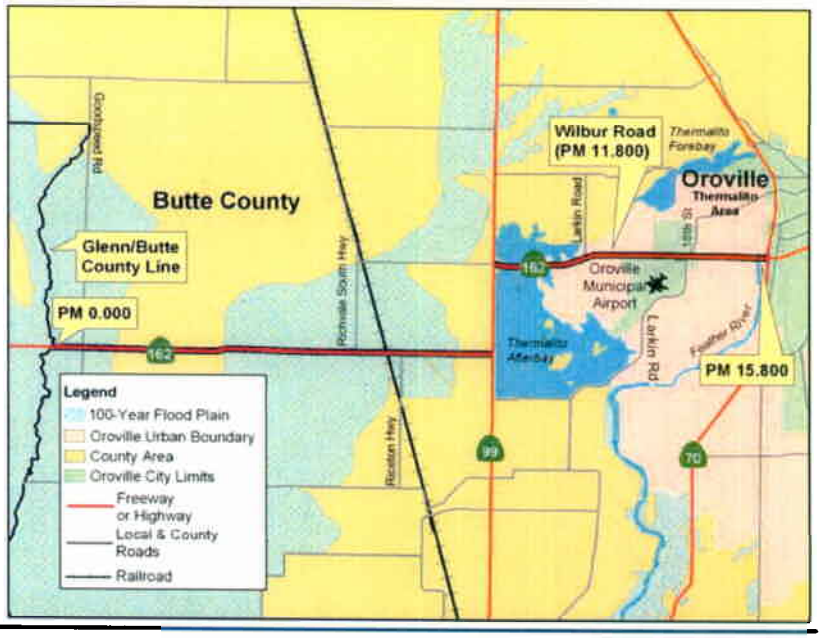
2-Lane Conventional

Concept Facility:

2-Lane Conventional from Glenn/Butte County line to Wilbur Road; and 4-Lane Conventional from Wilbur Road to SR 70

Ultimate Facility:

2-Lane Conventional from Glenn/Butte County line to Wilbur Road; and 4-Lane Conventional from Wilbur Road to SR 70



Level of Service (LOS)

Existing LOS:	E
20 yr. LOS - No Build:	F
20 yr. Concept LOS:	E

County General Plan:	Butte
General Plan Year:	1998
General Plan LOS Standard:	D

Main Street Communities

Community Name:	General Plan Year:	General Plan LOS Standard:
Oroville	1995	D

TRANSPORTATION CONCEPT IMPROVEMENTS

- From Wilbur Road to SR 70, widen from 2 to 4 lanes.

- Support an increase in fixed-route transit services along the segment.

- From Larkin Road to SR 70, provide pedestrian sidewalks.

- Widen shoulders to an 8-foot standard throughout segment.

- From SR 99 to SR 70, provide a Class II Bike facility (bike lane).

- Outside the Greater Oroville Area, provide a Class III Bike facility (bike route).

DESCRIPTION - RATIONALE - GENERAL COMMENTS

Segment 5 is a 2-lane conventional rural highway, which extends from the Glenn/Butte County line to State Route (SR) 70. From Wilbur Road to SR 70, a small portion of this route travels through the western portion of the City of Oroville. There is a 2-mile break in route at the SR 99/162 Junction.

During 2000, the Annual Average Daily Traffic (AADT) for this segment was 11,960 vehicles with a LOS of E. Over the next 20 years, the approved and planned development along Segment 5 is expected to impact the Level of Service (LOS) on the facility. In fact, the AADT is expected to increase by 6 percent per year, which is equivalent to 24,590 vehicles. With no improvements, this increase will downgrade the LOS from E to F. The increased levels of approved residential and non-residential development between Wilbur Road and SR 70 are expected to be the primary causes for this reduction in LOS. Moreover, the additional planned development identified in the 1995 Oroville General Plan is expected to attract even more vehicles to this segment. Build out of the Oroville community will impact the traffic on the SR 162 facility.

To address the future traffic volumes and subsequent congestion in the Oroville area, both capacity increasing solutions and strategies that maximize the efficiency of the existing transportation resources (i.e. Transportation Demand Management [TDM]), will need to be explored. Oroville's General Plan proposes that the western portion of SR 162 (west of SR 70) be widened from 2 to 4 lanes within the 20-year planning period. In conjunction with this, TDM solutions or strategies, such as an increase in transit services, should be investigated to help alleviate future congestion.

Another strategy for improving mobility along this segment is to provide a Class II Bikeway (bike lane) from SR 99 to SR 70. This would connect SR 99, the Thermalito Area, and the surrounding recreational areas with the city of Oroville. Currently, two Class I Bike trails, between SR 99 and SR 70, are located to the north and south of SR 162. These trails provide access to the Thermalito Forebay and Afterbay, the Oroville Wildlife Area, and various other recreational areas along the route.

At the northern intersection of SR 99 and 162, the total collision rate for SR 162 is 20 percent below the statewide average. In contrast, the SR 99 TCR states that the total collision rate is 79 percent over the statewide average. The reason for this difference is because the accidents that typically occur at the SR 99 and 162 intersection are more often than not on SR 99. To address this issue, a signalized intersection, along with left turn lanes in both directions, a deceleration lane on the northbound direction, and pedestrian crossings, will be constructed at the intersection. The expected completion date for this project is December 2005.

To permit sufficient shared roadway use between motorists and bicyclists in the areas outside the Oroville urban boundary, the shoulders need to be widened to current design standards. The current standard for outside shoulders on a 2-lane undivided conventional highway is 2.4 meters or approximately 8 feet. The average shoulder width for Segment 5 is less than 1.5 meters or 5 feet. After the shoulders meet current design standards, signs should be posted at various locations to indicate that the segment is a Class III Bike Facility (bike route).

In addition, from 18th Street to SR 70, providing a continuous sidewalk along the segment will improve the pedestrian access to businesses and other destinations along Segment 5. This can provide an economic benefit to the businesses in the area. Currently, the sidewalks along the

segment are in varying locations and are not continuous.

The Master Plan for Oroville Municipal Airport states that the growth rate for the Oroville Municipal Airport, which is located in the Oroville area, is less than 1 percent per year. As a result, the airport is not expected to generate a significant level of traffic over the next 20 years. Furthermore, ground access for this facility is adequate for the current and anticipated future operations.

The Thermalito Afterbay, located between SR 99 and the Oroville Municipal Airport, offers many recreational opportunities to the public (see description in Land Use section below). Although recreational traffic is expected to increase along this portion of the segment during the spring and summer months, Segment 5 is not expected to fall below the concept LOS E for the next 20 years.

During agricultural harvest (on a seasonal basis) from the Glenn/Butte County line to SR 99, truck traffic tends to increases. However, even with this increase in trucks, this portion of Segment 5 is not expected to fall below the concept LOS E in the next 20 years.

There is an at-grade railroad Union Pacific crossing at approximately PM 7.40. No improvements are needed for at the crossing.

Throughout this segment are areas within Zone A Flood Boundaries (i.e. 100-year flood plain) as designated by the Federal Emergency Management Agency (FEMA). These areas include: PM 0.0 to 1.4, PM 3.8 to 9.0, and PM 9.9 to 10.5. During heavy rains, some areas can flood anywhere from 1 to 18 inches. Flooding is also common along the county roads connecting to SR 162. If flooding prevents travel on SR 162, Caltrans maintenance crews close the facility at Aquafrias Road (PM 0.650) until conditions improve.

LAND USE

From the Glenn/Butte County line to SR 99, the land use is primarily agricultural with some residential development and is expected to remain the same over the next 20 years.

From SR 99 to Wilbur Road, Segment 5 runs adjacent to the Thermalito Afterbay. This water body is a component of the Oroville - Thermalito Complex, which is part of the State Water Project. After going through a series of processes to produce electricity, the water originating from Lake Oroville eventually flows into the Thermalito Afterbay. In addition to producing electricity, the Oroville - Thermalito Complex provides water storage and flood control, protects fish and wildlife, and creates recreation opportunities for the public include boating, swimming, fishing, picnicking, and limited hunting. The afterbay is also adjacent to the Oroville Wildlife Area and the Feather River Fish Hatchery Annex.

The Oroville Municipal Airport abuts SR 162 and Larkin Road. This general aviation facility is owned by the City of Oroville and serves over 36,500 operations per year. According to the 2001 BCAG RTP, 93 percent of the operations include single-engine aviation aircraft and 2 percent include business jets. The 1990 Airport Master Plan projects an 18 percent increase in operations by 2010, which is equivalent to less than 1 percent per year.

From Larkin Road to SR 70, the current land uses along SR 162 is are retail and business services and low, medium and high density residential. The 1995 Draft General Plan for the City of Oroville states that over the next 20 years, approximately 4,278 additional residential units are planned for this area. Approximately 86 percent of these residential units will be medium and

high-density housing. In addition, an estimated 3.2 million square feet of retail and business centers and business parks are also planned for areas surrounding this segment. The traffic generated by this growth will significantly impact the LOS and operations of SR 162.

MODAL OPTIONS

OROVILLE AREA TRANSIT SYSTEM (OATS): OATS provides an intracity fixed-route bus service along Segment 5. With 60 to 70 minute headways, this service consists of two bus routes: a northbound and southbound route. There is only 1-signed stop area along this segment. During the AM and PM hours, a total of 14 buses stop at each one of these signed areas. For more information, call (800) 822-8145 or visit www.bcag.org/transit.htm.

OROVILLE EXPRESS: The Oroville Express, a dial-a-ride service, is available to seniors and disabled individuals in the Oroville area. For more information, call (800) 822-8145 or visit www.bcag.org/transit.htm.

OROVILLE MUNICIPAL AIRPORT: The Oroville Municipal Airport primarily serves the Greater Oroville Area and Butte County. It provides services to private planes and jets, and charter flights. OROVILLE MUNICIPAL AIRPORT, 225 Chuck Yeager Way, Oroville, CA, (530) 533-1313.

BICYCLES: Currently, there are no existing Class II or III Bike facilities on SR 162. However, since bicyclists are permitted to use the roadway, this segment is designated as a shared roadway. The 1998 Countywide Bikeway Master Plan for Butte County indicates that a Class II Bike facility is planned for this segment from Wilbur Road (PM 11.800) to the Feather River (PM 15.570). There is no scheduled date for this project.

RIGHT OF WAY

Right of way width along Segment 5 varies between 18.29 and 49.38 meters (approximately 60 to 162 feet). From Wilbur Road (PM 11.800) to Feather River Bridge (PM 15.570), the concept is to widen the segment from 2 to 4 lanes, provide a Class II Bike lane, and provide shoulders that meet current design standards (see Appendix B for design standards). There is sufficient right of way to support the concept improvements.

Functional Classification Information

Functional Classification:	**Minor Arterial**
National Highway System (NHS):	**Non NHS**
Access Control:	**Conventional Highway**
National Truck System:	**Terminal Access Route**
Scenic Route:	**Non Scenic**
Lifeline Route:	**Non Lifeline**
Statewide Significance:	**Non Interregional Route System**

Highway Log Right of Way Information

Number of Lanes: 2

	Meters	*Feet*
Avg. Lane Width:	3.66	12.00
Avg. Shoulder Width:	1.52	5.00
Avg. Median Width:	0.00	0.00

General Comments:

Projects Planned (Non-funded)

1998 County of Butte - Countywide Bikeway Master Plan	Class II Bike lane on Oroville Dam Boulevard West (SR 162) from Wilbur Road to the Feather River

Projects Programmed (Funded)

2002 SHOPP	Install traffic signal at Richvale Road. (2004) $300,000

Traffic Data

Peak Period Direct Split:	51%
% Traffic Growth Per Year:	6%

Land-Use Data

Land Use Zone: Agriculture/Commerical/Residential

Terrain: Flat

Future-20yr. Land Use: Agriculture/Commerical/Residential

Traffic Analysis

Year	AADT	PkHrVol	V/CRatio	LOS	Comments
2000	11,960	1,020	0.64	E	None
2010	18,280	1,550	1.06	F	None
2020	24,590	2,090	1.42	F	None

Collision Rates

Total Collision Rate: 0.8

Compares the actual segment collision rate with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Fatality-plus-Injury Collision Rate: 0.82

Compares the actual fatality-plus-injury rates with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Note: Represents collision data from April 1998 to March 2001

Truck Volumes

	Daily Truck Volumes
3 Axle	115
4 Axle	77
5+ Axle	577
Total:	769

	% Trucks of Truck AADT	% Trucks of Total AADT
3 Axle	10.7%	1.0%
4 Axle	7.1%	0.6%
5+ Axle	53.6%	4.8%
Total:	71.4%	6.4%

Air Quality

The following information is a brief overview only. For specific environmental information, contact California Department of Transportation District 3 Environmental Offices.

Air Basin: Sacramento Valley

Federal Air Quality Area Designations:

CO: Attainment-Maintenance (CO Protocol Applies)

PM10: Unclassified/Attainment

Ozone: Transitional (pending reinstated 1-hr. std.)

Local and Regional Planning Agencies

RTPA/MPO

Butte County Association of Governments
965 Fir St.
Chico, CA 95928-6301
(530) 879-2468

Air Quality District

Butte County Air Quality Management District
2525 Dominic Drive, Suite J
Chico, CA 95928-7184
(530) 891-2882

County Planning Department

County of Butte
Department of Development Services, Planning Division
7 County Center Drive
Oroville, CA 95965-3334
(530) 538-7601

Congestion Management Agency

No CMA in County

City Planning Department

City of Oroville
Oroville Planning Department
1735 Montgomery Street
Oroville, CA 95965-4897
(530) 538-2430

District 3 - Transportation Concept Report Fact Sheet

Route Information

Route:	162
County:	Butte
Segment Number:	6

Segment Boundaries

KP Ahead	25.428	**PM Ahead**	15.800
KP Back	34.546	**PM Back**	21.466
Distance [km]	9.119	**Distance [mi]:**	5.666

Segment Description

From State Route 70 in Oroville to Canyon Drive

Concept Summary

Existing Facility:

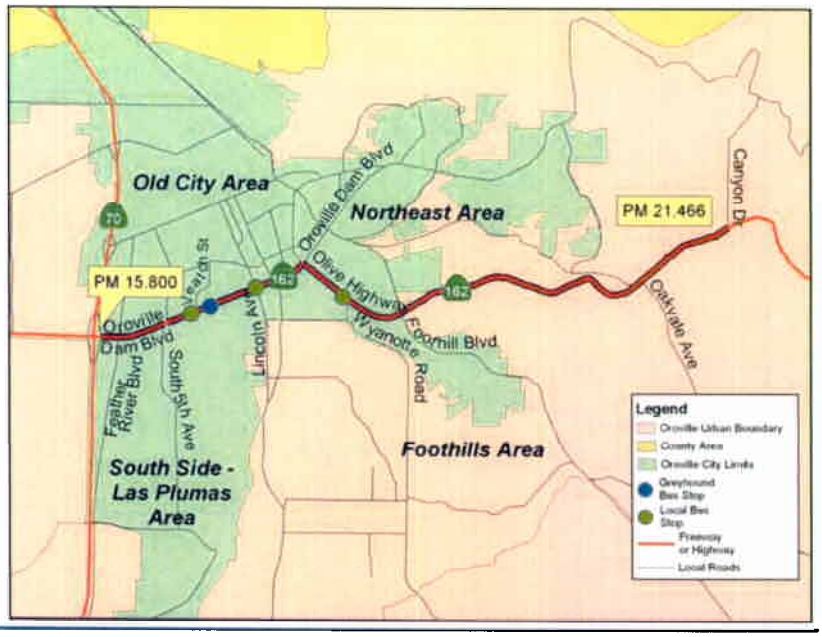
4-Lane Conventional from SR 70 to Olive Highway; and 2-Lane Conventional from Olive Highway to the end of the segment (PM 21.466)

Concept Facility:

4-Lane Conventional

Ultimate Facility:

4-Lane Conventional



Level of Service (LOS)

Existing LOS:	B
20 yr. LOS - No Build:	C
20 yr. Concept LOS:	E

County General Plan:	Butte
General Plan Year:	1998
General Plan LOS Standard:	D

Main Street Communities

Community Name:	General Plan Year:	General Plan LOS Standard:
Oroville	1995	D

TRANSPORTATION CONCEPT IMPROVEMENTS

- From Oroville Dam Boulevard to Oakvale Avenue (PM 20.739), widen from 2 to 4 lanes.

- Support an increase in transit services along segment.

- Provide a Class II Bike facility (bike lane) throughout segment or between SR 70 and Olive Highway.

- Provide continuous sidewalks from SR 70 to Foothill Boulevard.

- Widen shoulders to meet current design standards between PM 18.200 and 20.000 and PM 20.748 and 21.466.

- Add decorative lighting, street landscaping, and other traffic calming measures to enhance the appearance and promote safety on the segment

- Implement operational improvements at the intersection of Oroville Dam Boulevard and Olive Highway.

- Implement a coordinated traffic signal network between SR 70 and Foothill Blvd.

DESCRIPTION - RATIONALE - GENERAL COMMENTS

Segment 6 is both a 2 and 4-lane facility that travels through the city of Oroville, the county seat of Butte County, and the County of Butte. Incorporated in 1906, Oroville had an estimated population of 13,100 during 2001. At buildout, the Oroville General Plan states that the city can accommodate a projected population of 80,277 residents.

Segment 6 acts as a major arterial within Oroville and provides access to the recreational areas surrounding Lake Oroville. From SR 70 to Olive Highway, SR 162, which is also known as Oroville Dam Boulevard, is a 4-lane facility. From Oroville Dam Boulevard to Canyon Drive, SR 162, is a 2-lane facility known as Olive Highway.

At approximately PM 16.92, there is a railroad overpass that is perpendicular to the segment. The rail right of way belongs to Union Pacific.

Over the next 20 years, the approved and planned development along Segment 6 is expected to marginally impact the overall Level-of-Service (LOS) on the facility. During 2000, the Average Annual Daily Traffic (AADT) for Segment 6 was 26,000 vehicles with a LOS B. Increasing at an estimated rate of 3 percent per year, in 2020 the AADT is expected to reach 39,000 vehicles. With this volume of vehicles and without any roadway improvements, the facility should operate at a LOS C.

Although this segment, as a whole, will be operating at LOS C, the 2-lane portion of the segment, from Oroville Boulevard to Canyon Drive, will be operating at LOS F over the next 20 years without any improvements. During 2000, the AADT for the 2-lane portion of this segment was 26,000 with a LOS E. Over the next 20 years, the AADT is expected to reach 39,000 vehicles with a LOS F. The primary cause for the reduction in LOS is the increased levels of approved and planned residential and non-residential development.

To address the reduction in LOS on the 2-lane portion of the segment (i.e. Olive Highway), the 1995 City of Oroville General Plan and the 2001 Butte County Regional Transportation Plan (RTP) both plan to widen SR 162 between Oroville Dam Boulevard and Foothill Boulevard to 4 lanes. Traffic forecasts show that this will improve operations to LOS C along the whole segment. The project study report for this project is described below.

SR 162 OROVILLE PROJECT STUDY REPORT (PSR): The purpose of this project is to alleviate the congestion in Oroville along SR 162 by increasing its capacity from 2 to 4 or 5 lanes, depending on the location. The tentative project limits are between Oroville Dam Boulevard to Oakvale Avenue. If the project is constructed, Segment 6 is projected to operate at LOS C in 2020. This PSR was put on hold in mid-2003; work on it will resume at an undetermined date.

An operational analysis of the intersection of Oroville Dam Boulevard and Olive Highway should also be performed. Given the traffic growth over the next 20 years, this intersection is expected

to operate at a lower LOS compared to the 2000 LOS. The outcome of the analysis should identify current and future conditions, pinpoint deficiencies, and recommend improvements that will help the intersection operate more effectively and efficiently.

In addition to the aforementioned analysis, the City of Oroville and/or the County of Butte should perform an analysis on expanding its current coordinated traffic signal network. This will help to improve the overall traffic flow of the segment. The analysis should include all of the intersections between SR 70 and Foothill Boulevard. Currently, 5 out of 10 traffic signals are integrated into the coordinated network. The signals in this network are located at the following intersections: Lincoln Street, Myers Street, Oroville Dam Boulevard/Olive Highway, Oroville Medical Center Drive, and Lower Wyandotte Road. Any future traffic signals on this segment should be incorporated into the coordinated traffic network.

The Butte County RTP also identifies the addition of a traffic signal at the SR 162 – Oroville Dam Boulevard and Veatch Street intersection (approximately 1/4 miles east of 5th Avenue) as an unfunded local priority. Veatch Street connects to SR 162 from the north side of the segment. This section of Segment 6 is a 4-lane conventional highway with a left-hand turn lane in the eastbound direction. Adding a traffic signal will improve operations during the peak hour by providing protected left turns onto Veatch Steet from SR 162 (eastbound) and left turns onto SR 162 from Veatch Street (southbound).

Promoting the use of other modal options, such as transit and bicycle travel, will help lessen the vehicular demand on this facility and increase mobility in the Oroville area. The 1995 Oroville General Plan suggests that the development of a Class II Bike facility (bike lane) as part of a bicycle network throughout Oroville should be explored in order to increase the utility of bicycles not only for recreation, but for other types of trips as well. This bicycle network should seamlessly connect to the existing Class I Bike facilities (bike paths) to the north of the segment.

Other improvements for this facility can include sidewalks and decorative lighting throughout the segment. Sidewalks can both improve pedestrian access to businesses along the facility and promote walking as an alternative mode of transportation. Decorative lighting can give this segment a sense of community while enhancing pedestrian security at night.

Between SR 70 and Olive Highway, the use of street landscaping, community identifiers, site furnishings, on-street parking bulbouts, enhanced paving treatments (along pedestrian routes), and raised planters. These improvements can enhance safety for pedestrians, help create a sense of place, and help drivers recognize they are entering an area of increased pedestrian and bicycle activity.

LAND USE

The land uses along SR 162 between SR 70 and Olive Highway, located at the eastern portion of this segment (15.800 to 17.550), are primarily high volume retailers and business services, which include food stores, department stores, and automobile dealerships. The 1995 Draft General Plan for the City of Oroville states that these retailers and services account for 75 percent of the retail floor area and a larger share of the total sales in the city.

The retailers and services along Segment 6 play an important role in Oroville's economy. The 1995 Oroville General Plan identifies various objectives for maintaining the vitality of this segment. One objective is to "[m]aintain Oroville Dam Boulevard between Highway 70 and Olive Highway as one of ... [Oroville's] primary retail districts". To meet this objective, the City will plan for "... additional neighborhood shopping centers, stores, and highway commercial areas".

The Plan does not envision another single shopping center or retail area that will duplicate existing stores and services located on Oroville Dam Boulevard.

Another objective is to "[m]aintain accessibility to existing retail establishments and provide a retail expansion area by constructing a parallel arterial south of Oroville Dam Boulevard". The Plan states that this arterial will provide maximum retail benefit by allowing "... continuous retail facilities to be located behind existing Oroville Dam Boulevard retail frontage". If this parallel arterial meets the expectations of the City, one can expect a reduction in vehicle volumes on Segment 6 of SR 162. However, a more detailed analysis would need to be performed to get a more accurate account of the impacts on this segment.

Finally, the City wants to "[i]mprove the appearance of Oroville Dam Boulevard". The Plan suggests reducing "[s]ign clutter, undefined and barren parking lots, and development [that] gives the street an unpleasant and scattered appearance". Instead, the Plan recommends providing more "[c]urbs, sidewalks, and trees within the State Highway right-of-way ... [that will provide] ... a harmonious and pleasant street environment".

The area north of SR 162 between SR 70 and Olive Highway will experience a small amount of growth over the next 20 years. The 1995 Draft General Plan for the City of Oroville calls for 459 additional residential units in this area, which is known as Old City. The Plan also indicates that 805,000 and 299,000 square feet of additional retail and business services and offices, respectively, are planned for this area.

On the other hand, the area south of SR 162 between SR 70 and Olive Highway, also known as South Side - Las Plumas, will experience significant growth over the next 20-year period. The General Plan states that 5,645 additional residential units are planned for this area. Approximately 42 and 54 percent of this development are medium and high density housing units, respectively. In addition, 4.2 million square feet of additional retail and business services area are also allowed for in the General Plan.

On the Olive Highway portion of the segment, land uses along SR 162 are primarily residential and retail.

To the northeast of the Oroville Dam Boulevard/Olive Highway intersection, the Northeast Planning Sector will experience a moderate level of growth over the next 20 years. The General Plan indicates that approximately 1,640 additional residential housing units and 1.8 million square feet of additional retail and business services and offices are planned.

To the south of this portion of SR 162, the Foothills Planning Sector will experience a significant amount of growth during the 20 year planning period. An estimated 3,737 additional residential units are planned. Moreover, 1.2 million square feet of retail and business services are also planned for this area.

The Gold County Casino is located on the corner of SR 162 and Tyme Way (PM 20.141). This facility offers casino-type game slot machines, table games, bingo, showroom entertainment, bowling, and dining.

The cumulative impacts of the residential, retail, and business services will contribute to the reduction in LOS on Segment 6. These impacts will come in the form of higher volumes of traffic traveling on the facility.

MODAL OPTIONS

OROVILLE AREA TRANSIT SYSTEM (OATS): OATS provides an intracity fixed-route bus service along segment 6. With 60 to 70 minute headways, this service consists of two bus routes: a northbound and southbound route. There are 3 signed stop areas along this segment. During the AM and PM periods, a total of 14 buses stop at each one of these signed stop areas. For more information, call (800) 822-8145 or visit www.bcag.org/transit.htm.

BUTTE COUNTY TRANSIT (BCT): BCT also provides a fixed-route service along segment 6. Currently, there are three intercity bus routes that provide transit services to Oroville: Route 2 and 3 and the Oroville - Gridley/Biggs Saturday Service. Route 2 travels between Oroville and Chico. This route primarily provides service during the weekday AM and PM peak hours with headways ranging from 1 to 3 hours. However, Route 2 does provide limited midday and weekend trips. Route 3 travels through Paradise, Oroville, Gridley, and Biggs. With headways ranging from 3 to 4 hours, this service is limited to weekday periods. Lastly, the Oroville - Gridley/Biggs Saturday Service travels through Oroville, Palermo, and Gridley. This service offers 4 trips, 1 in the AM hours and 3 in the PM hours, along Segment 6. For more information, call (800) 822-8145 or visit www.bcag.org/transit.htm.

OROVILLE EXPRESS: The Oroville Express, a dial-a-ride service, is available to seniors and disabled individuals in the Oroville area. For more information, call (800) 822-8145.

TRANSIT CONSOLIDATION STUDY: Recently, the Butte County Associate of Governments (BCAG) completed the Transit Consolidation Study Summary Report. This study explored five consolidation alternatives for the various transit operators in Butte County. Of the five alternatives, one was chosen as the preferred alternative. This alternative was designed to consolidate the seven locally operated transit services, which include both fixed route systems and dial-a-ride services, within Butte County. The fixed route systems and dial-a-ride services that impact Segment 6 are Butte County Transit, Oroville Area Transit System, and the Oroville Express. More specifically, the preferred alternative will eliminate duplication of effort, simplify bus schedules and routes, and facilitate more effect marketing efforts. The implementation of this alternative is ongoing.

GREYHOUND LINES, INC.: Greyhound Lines, Inc. makes 2 daily stops at the Toms Sierra Chevron, also a Greyhound Ticketing Center, located at 5th Street and Oroville Dam Road (PM 16.394). For more information regarding bus tickets or schedules, call (530) 533-1333.

BICYCLES: Currently, there are no existing Class II or III Bike facilities on SR 162. However, bicyclists are permitted to use the roadway. The 1998 Countywide Bikeway Master Plan for Butte County indicates that a Class II Bike facility is planned for this segment. There is no scheduled date for this project.

RIGHT OF WAY

Right of way width varies between 18.29 and 36.88 meters (approximately 60 to 121 feet). From Oroville Dam Boulevard to the end of the segment (PM 21.3), the concept is to widen SR 162 from 2 to 4-lanes. This concept includes providing sidewalks from SR 70 to Foothill Boulevard and a Class II Bike facility throughout the whole segment or between SR 70 and Olive Highway.. At the minimum, this will require a total of 20.4 meters or approximately 70 feet of right-of-way (see Appendix B for design standards). Sufficient right of way for the concept facility improvements should be secured.

Functional Classification Information

Functional Classification:	**Principal Arterial**
National Highway System (NHS):	**Non NHS**
Access Control:	**Conventional Highway**
National Truck System:	**Non National Truck System**
Scenic Route:	**Non Scenic**
Lifeline Route:	**Non Lifeline**
Statewide Significance:	**Non Interregional Route System**

Highway Log Right of Way Information

Number of Lanes: 4

	Meters	*Feet*
Avg. Lane Width:	3.66	12.00
Avg. Shoulder Width:	2.13	7.00
Avg. Median Width:	1.22	4.00

General Comments:

Projects Planned (Non-funded)

1998 County of Butte - Countywide Bikeway Master Plan	Class II Bike lane on Oroville Dam Boulevard East (SR 162) from the Feather River to Orange Avenue
2001 Final Butte County RTP	Rehabilitation - rehab pavement from Oroville Dam Blvd to Foothill Blvd
2001 Final Butte County RTP	Widen roadway from Oroville Dam Blvd to Foothill Blvd
2001 Final Butte County RTP	Traffic Signal at SR 162 and Veatch Street (Local Priority)

Projects Programmed (Funded)

NO PROJECTS PROGRAMMED

Traffic Data

Peak Period Direct Split:	52%
% Traffic Growth Per Year:	5%

Land-Use Data

Land Use Zone: Commerical/Residential

Terrain: Flat/Rolling

Future-20yr. Land Use: Commerical/Residential

Traffic Analysis

Year	AADT	PkHrVol	V/CRatio	LOS	Comments
2000	26,000	2,300	0.40	B	2-lane portion has 23,000 AADT and 2,100 peak hour traffic with V/C of .74 and LOS of E.
2010	32,500	2,875	0.50	C	2-lane portion has 28,750 AADT and 2,625 peak hour traffic with V/C of .94 and LOS of E.
2020	39,000	2,875	0.60	C	2-lane portion has 34,500 AADT and 3,150 peak hour traffic with V/C of 1.13 and LOS of F.

Collision Rates

Total Collision Rate: 0.86

Compares the actual segment collision rate with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Fatality-plus-Injury Collision Rate: 1.01

Compares the actual fatality-plus-injury rates with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Note: Represents collision data from April 1998 to March 2001

Truck Volumes

	Daily Truck Volumes
3 Axle	541
4 Axle	49
5+ Axle	393
Total:	983

	% Trucks of Truck AADT	% Trucks of Total AADT
3 Axle	22.0%	2.0%
4 Axle	2.0%	0.2%
5+ Axle	16.0%	1.4%
Total:	40.0%	3.6%

Air Quality

The following information is a brief overview only. For specific environmental information, contact California Department of Transportation District 3 Environmental Offices.

Air Basin: Sacramento Valley

Federal Air Quality Area Designations:

CO: Attainment-Maintenance (CO Protocol Applies)

PM10: Unclassified/Attainment

Ozone: Transitional (pending reinstated 1-hr. std.)

Local and Regional Planning Agencies

RTPA/MPO

Butte County Association of Governments
965 Fir St.
Chico, CA 95928-6301
(530) 879-2468

Air Quality District

Butte County Air Quality Management District
2525 Dominic Drive, Suite J
Chico, CA 95928-7184
(530) 891-2882

County Planning Department

County of Butte
Department of Development Services, Planning Division
7 County Center Drive
Oroville, CA 95965-3334
(530) 538-7601

Congestion Management Agency

No CMA in County

City Planning Department

City of Oroville
Oroville Planning Department
1735 Montgomery Street
Oroville, CA 95965-4897
(530) 538-2430

District 3 - Transportation Concept Report Fact Sheet

Route Information		Segment Boundaries			
Route:	162	**KP Ahead**	34.546	**PM Ahead**	21.466
County:	Butte	**KP Back**	50.051	**PM Back**	31.100
Segment Number:	7	**Distance [km]**	15.504	**Distance [mi]:**	9.634

Segment Description

From Canyon Drive To Foreman Creek Road (east of Lake Oroville)

Concept Summary

Existing Facility:

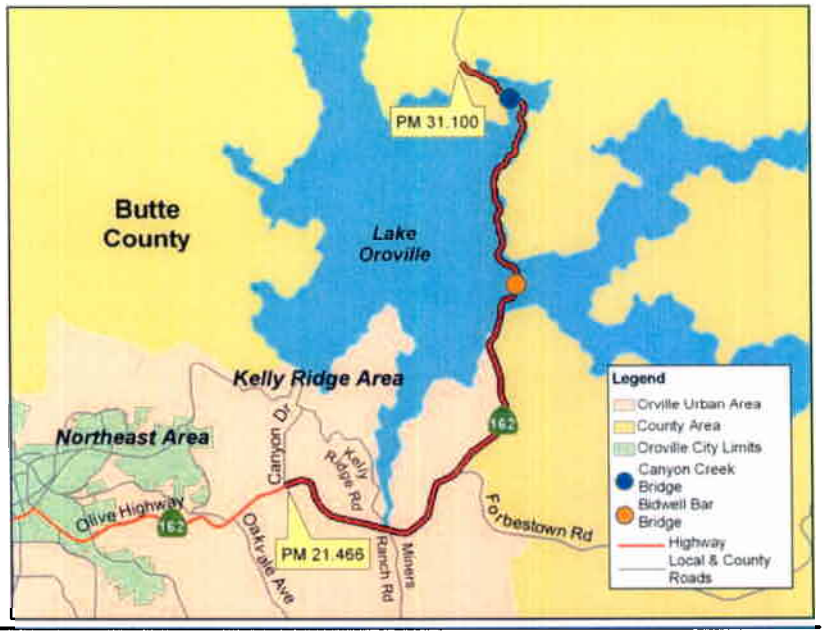
2-Lane Conventional

Concept Facility:

2-Lane Conventional

Ultimate Facility:

2-Lane Conventional



Level of Service (LOS)

Existing LOS:	E	County General Plan:	Butte
20 yr. LOS - No Build:	E	General Plan Year:	1998
20 yr. Concept LOS:	D	General Plan LOS Standard:	D

Main Street Communities

Community Name:	General Plan Year:	General Plan LOS Standard:
Not a Main Street		

TRANSPORTATION CONCEPT IMPROVEMENTS

- Widen shoulders to 8 foot standards between PM 21.466 and 21.600.

- Left-hand turn pocket at Forbestown Road in the westbound direction.

- Widen roadway to 12-foot standard throughout segment.

- Support an increase in fixed route transit services along the segment.

- Construct a 3 or 4-lane signalized intersection along with left turn lanes in west and eastbound directions at the existing intersection of Kelly Ridge Road/Miners Ranch Road and SR 162.

- Construct truck climbing lanes in the westbound (Kelly Ridge Road/Miners Ranch Road

towards Canyon Drive) and eastbound (Kelly Ridge Road/Miners Ranch Road towards Forbestown Road) directions.

DESCRIPTION - RATIONALE - GENERAL COMMENTS

Segment 7, the final segment of State Route (SR) 162, is a 2-lane facility that provides recreational access to Lake Oroville. This segment ends at PM 31.100, at Foreman Creek Road, just east of the Lake. The road continues as Forest Highway 119 to Quincy in Plumas County. The majority of this segment has many curves, increasing and decreasing grades, no passing lanes, and narrow shoulders. The areas surrounding Segment 7 include both mountainous and rolling hill terrain. With a combination of the curvature, grade changes, and the terrain, the vertical and horizontal sight distance is limited in many areas along the segment. This often negatively impacts the operations and capacity on a given facility.

Overall, in the year 2000, the Average Annual Daily Traffic (AADT) for Segment 7 was 6,023 vehicles with a LOS of E. Increasing at an average rate of 5 percent a year, in 2020, the AADT is expected to reach 11,250 vehicles with a LOS of E. These low LOS figures for the years 2000 and 2020 are largely attributed to the mountainous terrain along the facility.

Measures that reduce vehicle miles traveled and traffic volumes on the segment will help improve the 20-year no-build LOS. One of these measures may include supporting an increase in fixed route transit services for the areas surrounding the segment. This will help alleviate vehicle congestion on the roadway.

There are two issues identified along Segment 7. First, visibility is restricted at various points along this segment due to limited horizontal and vertical sight distance. Because of limited right of way and the mountainous terrain along the segment, improvements are not feasible in the areas of limit sight distance. Second, SR 162 at Forbestown Road is a three-way intersection with no left-hand turn pocket in the westbound direction. However, left turns are permitted in this intersection. To improve safety and operations, and remove turning vehicles from the westbound through-travel lane, a left turn pocket should to be constructed at this intersection.

In future years, due to the increased development in the Kelly Ridge Area (north of SR 162) and increased traffic volumes on SR 162, various improvements between Canyon Drive and Forbestown will be necessary. One of these improvements is a 3 or 4-lane signalized intersection at Kelly Ridge Road/Miners Ranch Road and SR 162. Currently, cars entering SR 162 from Kelly Ridge Drive (from the north) and Miners Ranch Road (from the south) have difficulty making left hand turns onto SR 162 because of the volume of traffic traveling in the east and west directions of SR 162. Furthermore, the vehicles on SR 162 tend to travel at excessive speeds through this intersection because approaches to the intersection from both directions consist of downward sloping grades, causing vehicles tend to gain speed. Adding a traffic signal and west and eastbound left-turn lanes will allow the cars from Kelly Ridge Road and Miners Ranch Road to safely turn onto SR 162.

In conjunction with the signalized intersection, truck climbing lanes should also be constructed to east and west of the Kelly Ridge Road/Miners Ranch Road and SR 162 intersection. In 2001, approximately 420 trucks traveled on segment 7. With a signalized intersection, these trucks will have difficulty accelerating up the upward sloping grades after passing through the intersection. Truck climbing lanes will allow trucks to accelerate up the increasing grades while minimizing the impacts to fast-moving traffic on this section of the roadway.

To permit sufficient shared roadway use between motorists and bicyclists, the shoulders for this

segment would need to be widened to current design standards. The current standard for outside shoulders on a 2-lane undivided conventional highway is 2.4 meters or approximately 8 feet. The average shoulder width for Segment 4 is less than 1.2 meters or 4 feet.

During the Spring, Summer and Fall seasons, Lake Oroville offers many recreational activities to the public, such as fishing, camping, boating, water skiing, and picnicking. During these seasons, traffic levels increase. However, these increases are not enough to significantly impact the level of service and operations along the facility on a consistent basis.

The Middle Fork Feather River Bridge (also known as Bidwell Bar Bridge), is located at PM 26.870. The bridge was originally located 1.5 miles upstream of its current location. Judge Joseph Lewis originally constructed the structure in 1856. Before the construction of Lake Oroville in 1968, there were concerns that the bridge would be submerged under the water. As a result, the structure was dismantled and relocated to its current location. The California Department of Water Resources designed the new bridge and contracted for its construction. The project was completed in August 1965. The current structure spans 546.5-meters across Lake Oroville and has 2 lanes, each 4-meters wide. With 1-meter sidewalks on each side, there is limited pedestrian access and no bike facilities on this bridge. Although bikes are permitted, bicyclists must walk their bikes across the bridge using the sidewalk.

In 1967, at PM 29.963, the Canyon Creek Bridge was constructed. There are 2-lanes on this structure. Each lane is 12 feet (or 3.66 meters) wide. With two 2-foot (or 0.6-meter) sidewalks, this bridge has limited pedestrian access. However, bicyclists are permitted to use the roadway.

LAND USE

Land uses along this segment are low-density residential, and retail and business services.

Lake Oroville is located on the north side of SR 162 and is a key component to the State Water Project and the Oroville - Thermalito Complex. The Lake offers nearly 16,000 surface acres and 167 miles of shoreline. With a capacity of more than 1.1-trillion gallons of water, Lake Oroville delivers most of its water to the Feather River. From there it flows into the Sacramento River and down to the Sacramento-San Joaquin Delta. The Oroville - Thermalito Complex, a system designed to produce electricity, provides water storage and flood control, protects fish and wildlife, and creates recreation opportunities for the public. Recreation opportunities at the lake includes fishing, camping, picnicking, horseback riding, hiking, sail and power boating, water-skiing, fishing, swimming, boat-in camping, floating campsites and horse camping.

MODAL OPTIONS

BICYCLES: Currently, there are no existing Class II or III Bike facilities on SR 162. However, since bicyclists are permitted to use the roadway, this segment is designated as a shared roadway. The 1998 Countywide Bikeway Master Plan for Butte County indicates that a Class II Bike facility is planned from the beginning of the segment (PM 21.300) to Kelly Ridge Road (PM 22.899). There is no scheduled date for this project.

RIGHT OF WAY

Right-of-way varies between 12 and 30 meters (approximately 39 to 98 feet). The concept for Segment 7 is to widen the shoulders to current design standards throughout the segment (see Appendix B for design standards) and constuct truck climbing lanes to east and west of the Kelly Ridge Road/Miners Ranch Road and SR 162 intersection (PM 22.899). At the minimum,

providing shoulders throughout the segment will require a total of 12 meters or approximately 40 feet of right-of-way. Providing truck climbing lanes with shoulders will require a total of 15.6 meters or approximately 51.2 feet of right-of-way will be required. Sufficient right of way for the concept facility improvements should be secured.

Functional Classification Information

Functional Classification:	**Minor Collector**
National Highway System (NHS):	**Non NHS**
Access Control:	**Conventional Highway**
National Truck System:	**Non National Truck System**
Scenic Route:	**Non Scenic**
Lifeline Route:	**Non Lifeline**
Statewide Significance:	**Non Interregional Route System**

Highway Log Right of Way Information

Number of Lanes: 2

	Meters	*Feet*
Avg. Lane Width:	3.66	12.00
Avg. Shoulder Width:	1.22	4.00
Avg. Median Width:	0.00	0.00

General Comments:

Projects Planned (Non-funded)

1998 Butte County - Countywide Bikeway Master Plan	Class II Bike lane on Olive Highway (SR 162) from Oroville Dam Boulevard East to Kelly Ridge Road

Projects Programmed (Funded)

NO PROJECTS PROGRAMMED

Traffic Data

Peak Period Direct Split:	60%
% Traffic Growth Per Year:	4%

Land-Use Data

Land Use Zone: Rural Residential

Terrain: Rolling/Mountainous

Future-20yr. Land Use: Rural Residential

Traffic Analysis

Year	AADT	PkHrVol	V/CRatio	LOS	Comments
2000	6,020	640	0.40	E	None
2010	8,640	910	0.57	E	None
2020	11,250	1,190	0.74	E	None

Collision Rates

Total Collision Rate: 1.17

Compares the actual segment collision rate with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Fatality-plus-Injury Collision Rate: 1.01

Compares the actual fatality-plus-injury rates with the statewide average rate on facilities of this type. Note: 1 equals the statewide average.

Note: Represents collision data from April 1998 to March 2001

Truck Volumes

	Daily Truck Volumes
3 Axle	93
4 Axle	8
5+ Axle	67
Total:	169

	% Trucks of Truck AADT	% Trucks of Total AADT
3 Axle	22.0%	1.5%
4 Axle	2.0%	0.1%
5+ Axle	16.0%	1.1%
Total:	40.0%	2.8%

Air Quality

The following information is a brief overview only. For specific environmental information, contact California Department of Transportation District 3 Environmental Offices.

Air Basin: Sacramento Valley

Federal Air Quality Area Designations:

CO: Attainment-Maintenance (CO Protocol Applies)

PM10: Unclassified/Attainment

Ozone: Transitional (pending reinstated 1-hr. std.)

Local and Regional Planning Agencies

RTPA/MPO

Butte County Association of Governments
965 Fir St.
Chico, CA 95928-6301
(530) 879-2468

Air Quality District

Butte County Air Quality Management District
2525 Dominic Drive, Suite J
Chico, CA 95928-7184
(530) 891-2882

County Planning Department

County of Butte
Department of Development Services, Planning Division
7 County Center Drive
Oroville, CA 95965-3334
(530) 538-7601

Congestion Management Agency

No CMA in County

City Planning Department

No incorporated city governments along segment

Appendix A: Current Design Standards

From Highway Design Manual, November 1, 2001

Paved Shoulder Width

Conventional Highways – Multilane Undivided	
Left	Right
--	2.4 meters (approx. 8 feet)

Traveled Way Width

Conventional Highways – Multilane Undivided
3.6 meters (approx. 12 feet)

Bicycle Facilities

	Minimum Width of Traveled Way	Minimum Horizontal Clearance to Obstructions	Minimum Vertical Clearance to Obstructions
Class I Bikeway (One-way)	1.5 meters (approx. 5feet)	0.6 meters (approx. 2 feet)	2.5 meters (approx. 8 feet)
Class I Bikeway (Two-way)	2.4 meters (approx. 8 feet)	0.6 meters (approx. 2 feet)	2.5 meters (approx. 8 feet)
Class II Bikeway (parking permitted with striped parking or stall)	1.5 meters (approx. 5 feet)	--	--
Class II Bikeway (parking permitted without parking stripe or stall)	3.3 meters (approx. 11 feet)	--	--
Class II Bikeway (parking prohibited)	1.5 meters (approx. 5 feet)	--	--
Class III Bikeway	** Note*	--	--

** Note: Minimum width is dependent on many factors, including the volume and character of vehicular traffic on the road, typical speeds, vertical and horizontal alignment, sight distance, and parking conditions. Recommend that minimum widths be standard shoulder width (2.4 meters [approximately 8 feet]).*

Appendix B: Bridge Information

Segment ID	Postmile	Bridge Number	Structure Name	Structure Type	Length [meters]	Width [meters]	Sidewalks [meters]	Year Built	Year Widened	Min. Vert. Clearance [meters]
GLE-162-1	43.540	11 0098	Salt Creek	Concrete Continuous – Slab	19.5	8.6				
GLE-162-1	45.130	11 0087	Stony Creek	Prestressed Concrete Continuous – Box Beam or Girders – Multiple	111.6	13.3		1991		
GLE-162-1	51.790	11 0088	Nye Creek	Concrete – Culvert	10.1	9.2		1953		
GLE-162-2	60.760	11 0096	Tehama – Colusa Canal	Prestressed Concrete – Stringer/Multi-beam or Girder	21.3	21.3		1973		
GLE-162-2	62.500	11 090	South Fork Willow Creek	Concrete Continuous – Slab	28.0	11.1		1981		
GLE-162-2	65.500	11 0056	Route 162/5 Separation	Concrete Continuous – Box Beam or Girders – Multiple	64.9	11.3	1.5	1966		
GLE-162-3	67.210	11 0009	Central Irrigation Canal	Concrete – Culvert	18.9			1925	1961	
GLE-162-4	67.740	11 0010	Willow Creek	Concrete Continuous – Slab	78.3	10.6		1960		
GLE-162-4	68.160	11 0011	Walker Creek	Concrete Continuous – Slab	41.1	11.1		1942	1963	
GLE-162-4	70.590	11 0012	Quint Canal	Concrete Continuous – Slab	25.9	10.6		1963		
GLE-162-4	73.550	11 0013	Brush Canal	Concrete Continuous – Slab	13.7	11.3		1963		
GLE-162-4	74.560	11 0059	Colusa Drain	Concrete – Culvert	11.3			1963		
GLE-162-4	75.640	11 0014	Shepards Slough	Concrete – Slab	13.7	10.6		1958		
GLE-162-4	76.250	11 0035	Princeton – Codora Canal	Concrete Continuous – Slab	10.7	12.3	1.5	1963		
GLE-162-4	76.700	11 0017	Sacramento River	Steel – Truss – Thru; Concrete Continuous – Slab	1337.8	9.1		1948	1961	4.69

Appendix B: Bridge Information (Cont.)

Segment ID	Postmile	Bridge Number	Structure Name	Structure Type	Length [meters]	Width [meters]	Sidewalks [meters]	Year Built	Year Widened	Min. Vert. Clearance [meters]
GLE-162-4	79.070	11 0018	Sacramento River Overflow	Concrete Continuous – Slab	23.5	9.7		1964		
GLE-162-4	79.550	11 0019	Sacramento River Overflow	Concrete Continuous – Slab	29.9	10.4		1968		
GLE-162-4	79.960	11 0020	Sacramento River Overflow	Concrete Continuous – Slab	33.5	9.3		1940		
GLE-162-4	80.030	11 0021	Sacramento River Overflow	Concrete – Tee Beam	18.6	10.4		1919		
GLE-162-4	80.720	11 0022	Angels Slough	Concrete Continuous – Slab	44.5	10.4		1975		
GLE-162-4	81.630	11 0023	Sacramento River Overflow	Steel – Stringer/Multi-beam or Girder	128.6	8.7			1949	
GLE-162-4	81.860	11 0033	Sacramento River Overflow	Concrete Continuous – Slab	46.0	10.4		1937	1975	
GLE-162-4	82.010	11 0024	Campbell Slough	Steel – Stringer/Multi-beam or Girder	73.8	8.6		1916	1949	
GLE-162-4	83.670	11 0032	Big Butte Creek Overflow	Concrete Continuous – Slab	50.6	10.6		1937	1964	
GLE-162-4	83.810	11 0033	Big Butte Creek Overflow	Concrete Continuous – Slab	67.4	10.6		1937	1964	
GLE-162-4	83.890	11 0034	Big Butte Creek Overflow	Concrete Continuous – Slab	29.9	10.8		1937	1964	
GLE-162-4	84.110	11 0026	Big Butte Creek Overflow	Concrete Continuous – Slab	55.8	9.4		1953		
GLE-162-4	84.580	11 0027	Big Butte Creek	Steel – Stringer/Multi-beam or Girder	50.6	9.6		1951		
BUT-162-5	0.220	12 0057	Big Butte Creek Overflow	Concrete Continuous – Slab	39.6	9.3		1940		
BUT-162-5	0.520	12 0056	Big Butte Creek Overflow	Steel – Stringer/Multi-beam or Girder	36.9	8.0		1943		
BUT-162-5	1.320	12 0055	Dry Creek	Concrete Continuous – Slab	19.8	10.4		1975		

Appendix B: Bridge Information (Cont.)

Segment ID	Postmile	Bridge Number	Structure Name	Structure Type	Length [meters]	Width [meters]	Sidewalks [meters]	Year Built	Year Widened	Min. Vert. Clearance [meters]
BUT-162-5	6.670	12 0042	Cherokee Canal	Concrete – Stringer/Multi-beam or Girder	132.6	10.0		1956		
BUT-162-5	7.000	12 0041	Rice Canal	Concrete – Culvert	8.5	10.6		1956		
BUT-162-5	8.110	12 0040	Biggs Extension Canal	Concrete Continuous – Slab	14.6	9.3		1951		
BUT-162-5	R10.120	12 0031	Thermalito Afterbay	Concrete – Box Beam or Girders – Multiple	205.4	12.8		1967		
BUT-162-5	15.570	12 0193	Feather River	Prestressed concrete continuous – Box Beam or Girders – Multiple	219.2	15.8	1.5	2000		
BUT-162-7	15.830	12 0147	S Oroville Sep	Concrete Continuous – Box Beam or Girders – Multiple	47.9	27.0		1962		4.57
BUT-162-7	16.900	12 0185	South Oroville Up	Concrete – Box Beam or Girders – Multiple	39.0	0.0		1986		4.69
BUT-162-7	26.870	12 0188	Middle Fork Feather River	Steel – Suspension; Steel – Stringer/Multi-beam or Girder	546.5	10.0	1.0	1965		8.84
BUT-162-7	29.960	12 184	Canyon Creek	Steel – Stringer/Multi-beam or Girder	237.7	10.4	0.6	1967		

Appendix C: California Natural Diversities Database

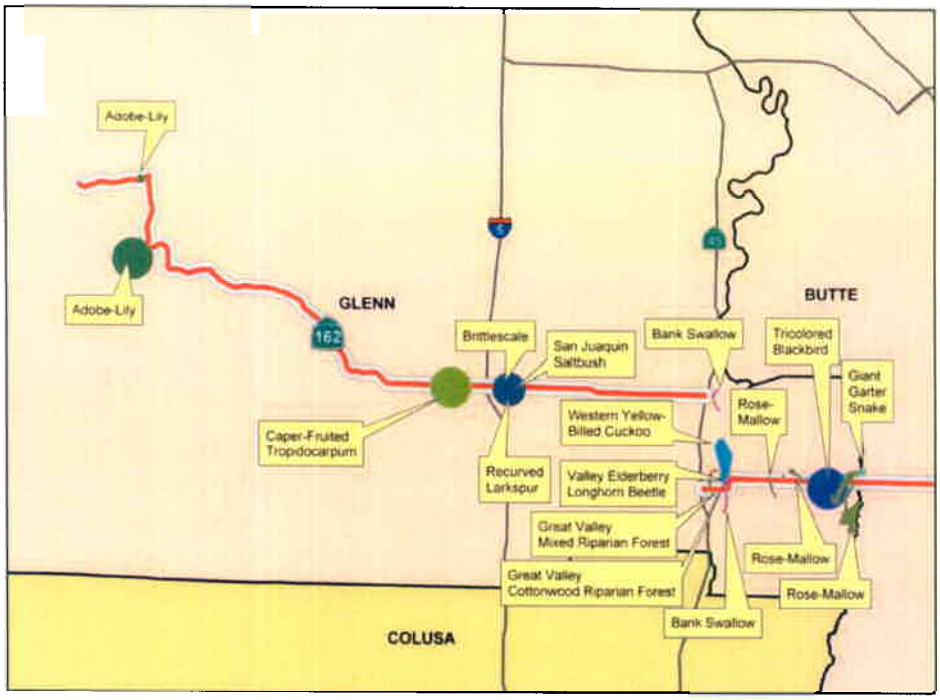
The California Natural Diversity Database (CNDDB) is a statewide inventory of the locations and condition of the state's biological resources, including rare species and natural communities. The CNDDB was used in this report to provide an initial assessment of the known biological resources in proximity to State Route 162 in District 3. Impacts to biological resources affect both the feasibility of a transportation project and the identification of alternatives.

The following maps depict SR 162 as it extends approximately 115 miles from the Mendocino County/Glenn line in the Mendocino National Forest to Foreman Creek Road (east of Lake Oroville), within District 3. The special status table (Table 2) and the two county maps (Maps 3 and 4), identify the status of habitats and species found within a 600-meter wide corridor of SR 162. This information does not represent all possible environmental constraints that may exist, such as cultural resources (historic and prehistoric), floodplain encroachment, hazardous materials, noise, and visual impacts. Any project that is being considered for programming would require an environmental document in compliance with all State, Federal, and Local environmental laws and regulations.

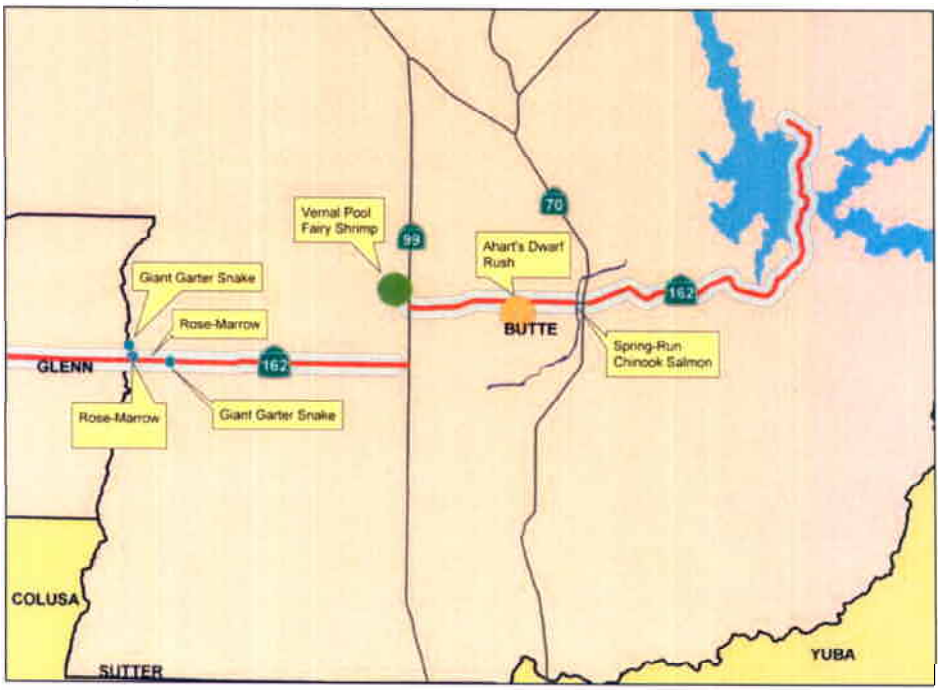
Table 2 – SR 162 Special Status Species (Common Names)

ANIMAL	PLANT	HABITAT
• Spring-run Chinook Salmon • Giant Garter Snake • Vernal Pool Fairy Shrimp • Valley Elderberry Longhorn Beetle • Tricolored Blackbird • Western Yekkiw-Billed Cuckoo • Bank Swallow	• Rose-Mallow • Ahart's Dwarf Rush • Brittlescale • Recurved Larkspur • San Joaquin Saltbush • Adobe Lily • Caper-Fruited Tropidocarpum	• Great Valley Mixed Forest • Great Valley Cottonwood Riparian Forest • Coastal and Valley Freshwater Marsh

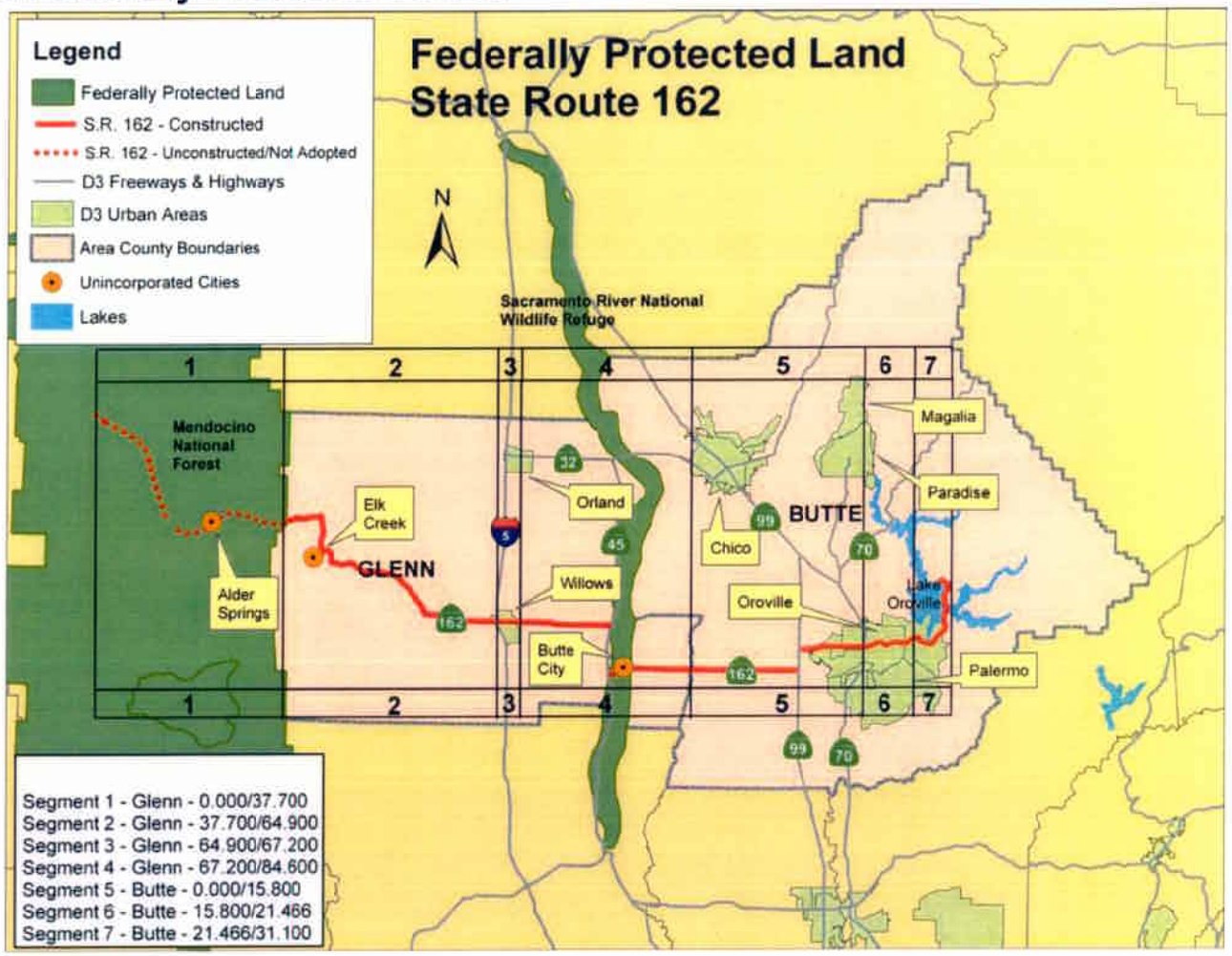
Map 3 – California Natural Diversities Database (Glenn County)



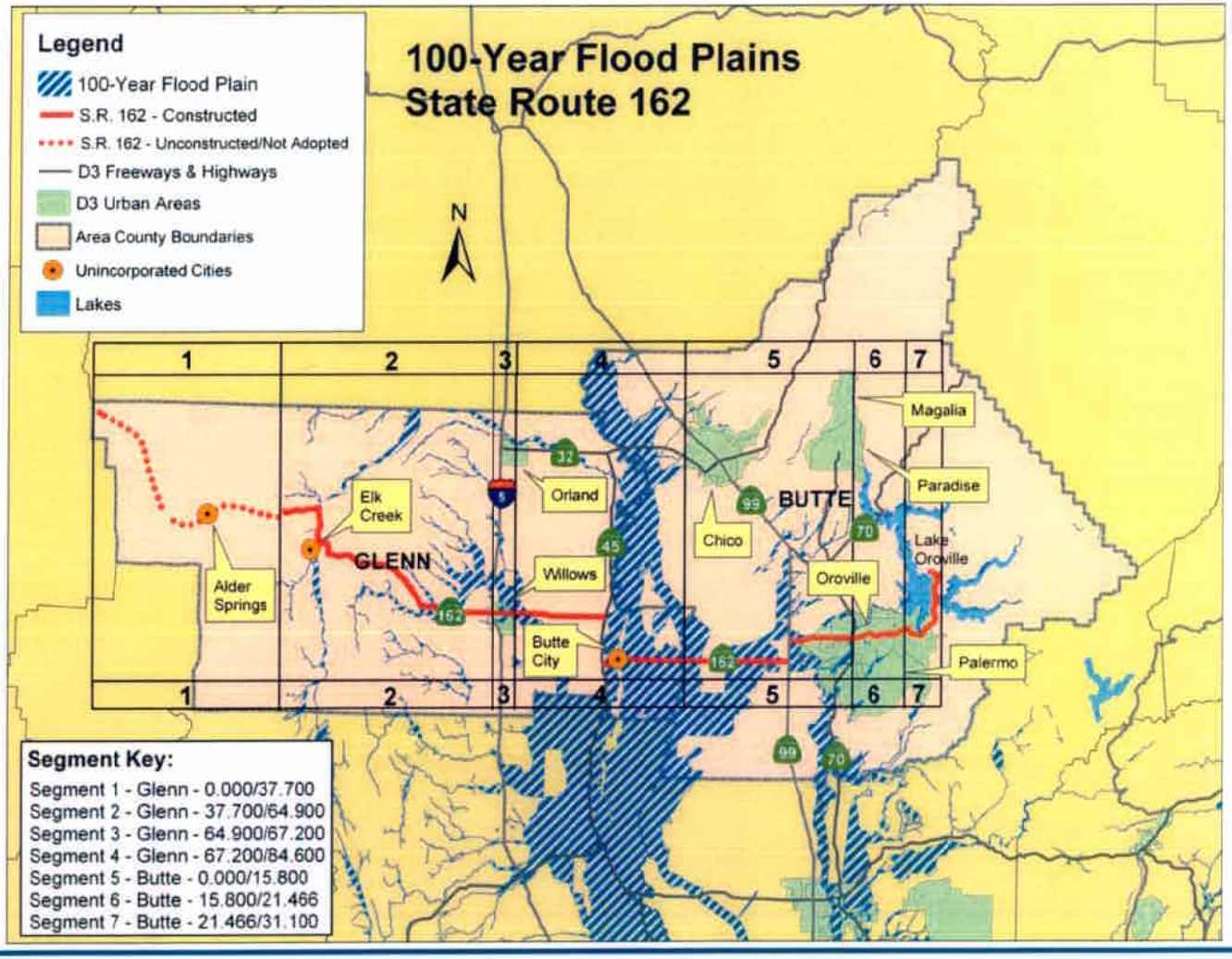
Map 4 – California Natural Diversities Database (Butte County)



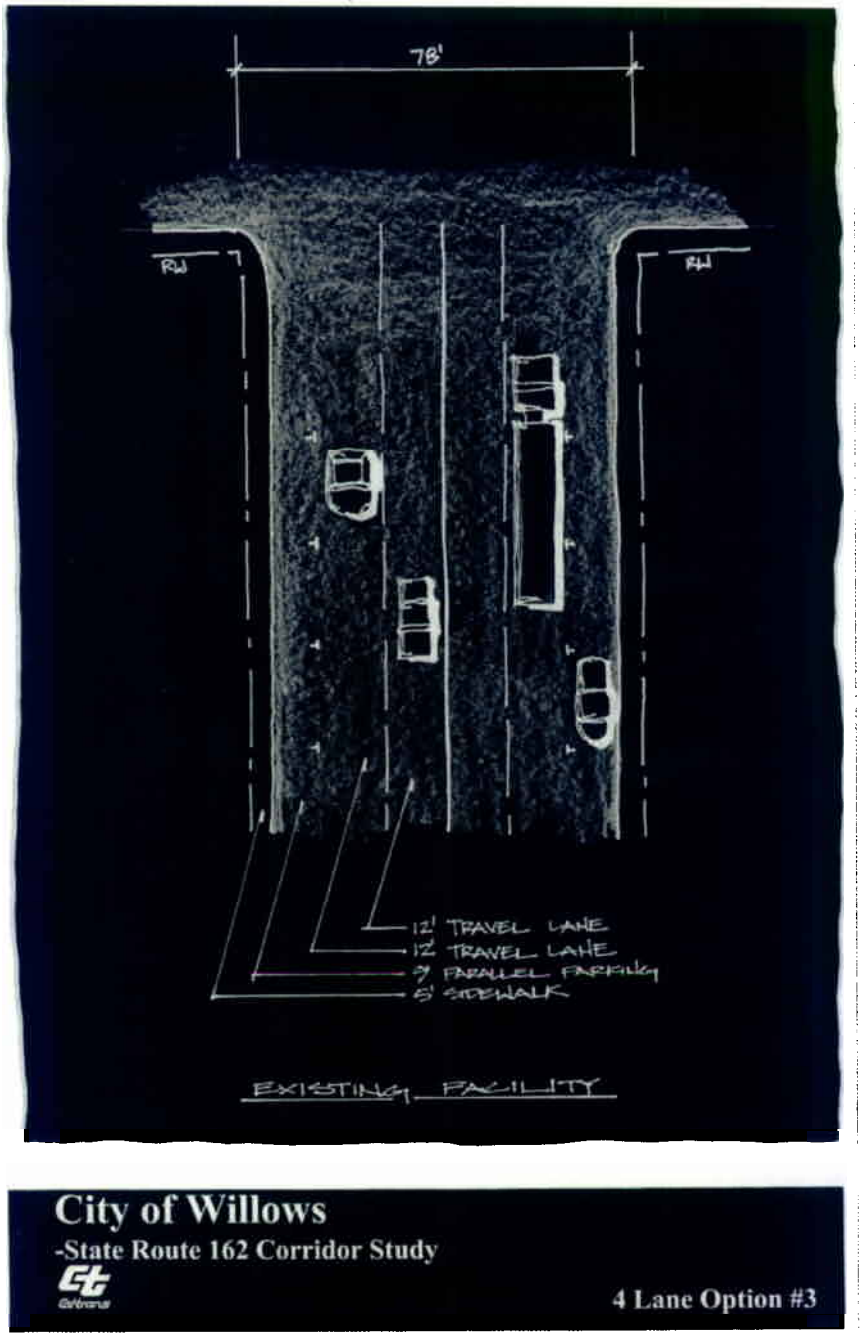
Appendix D: Federally Protected Lands



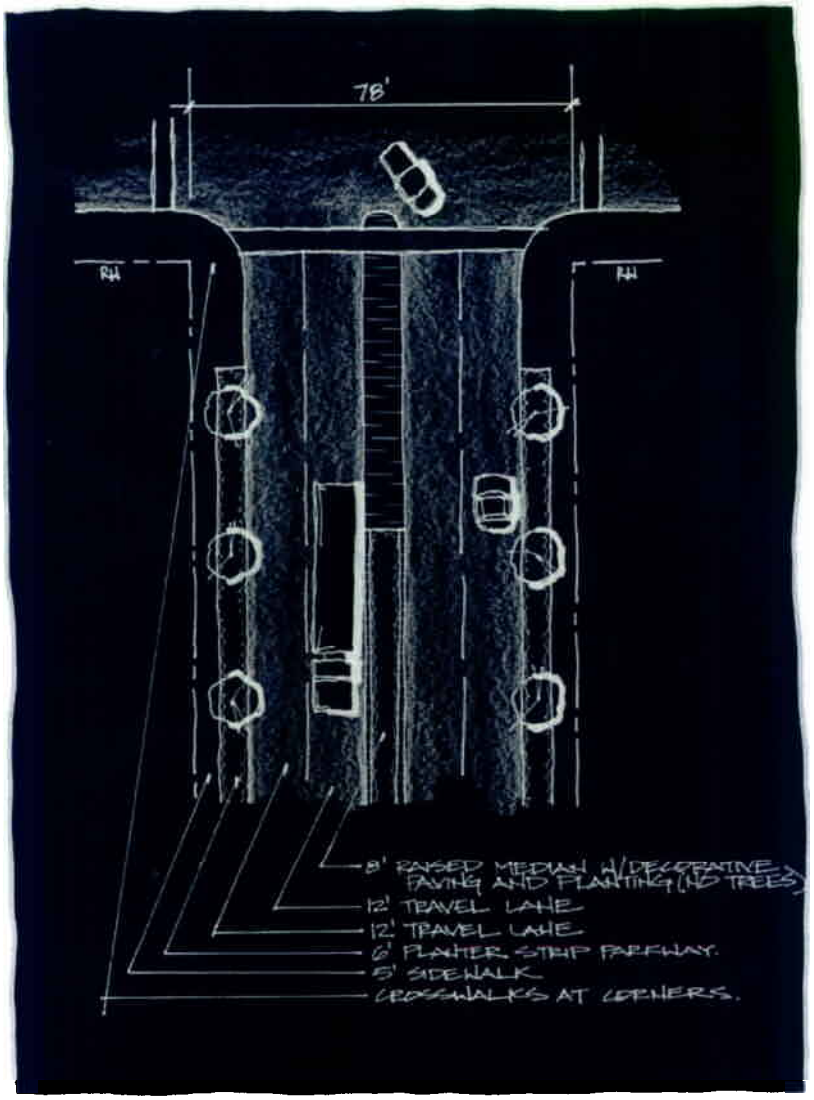
Appendix E: 100-Year Flood Plains



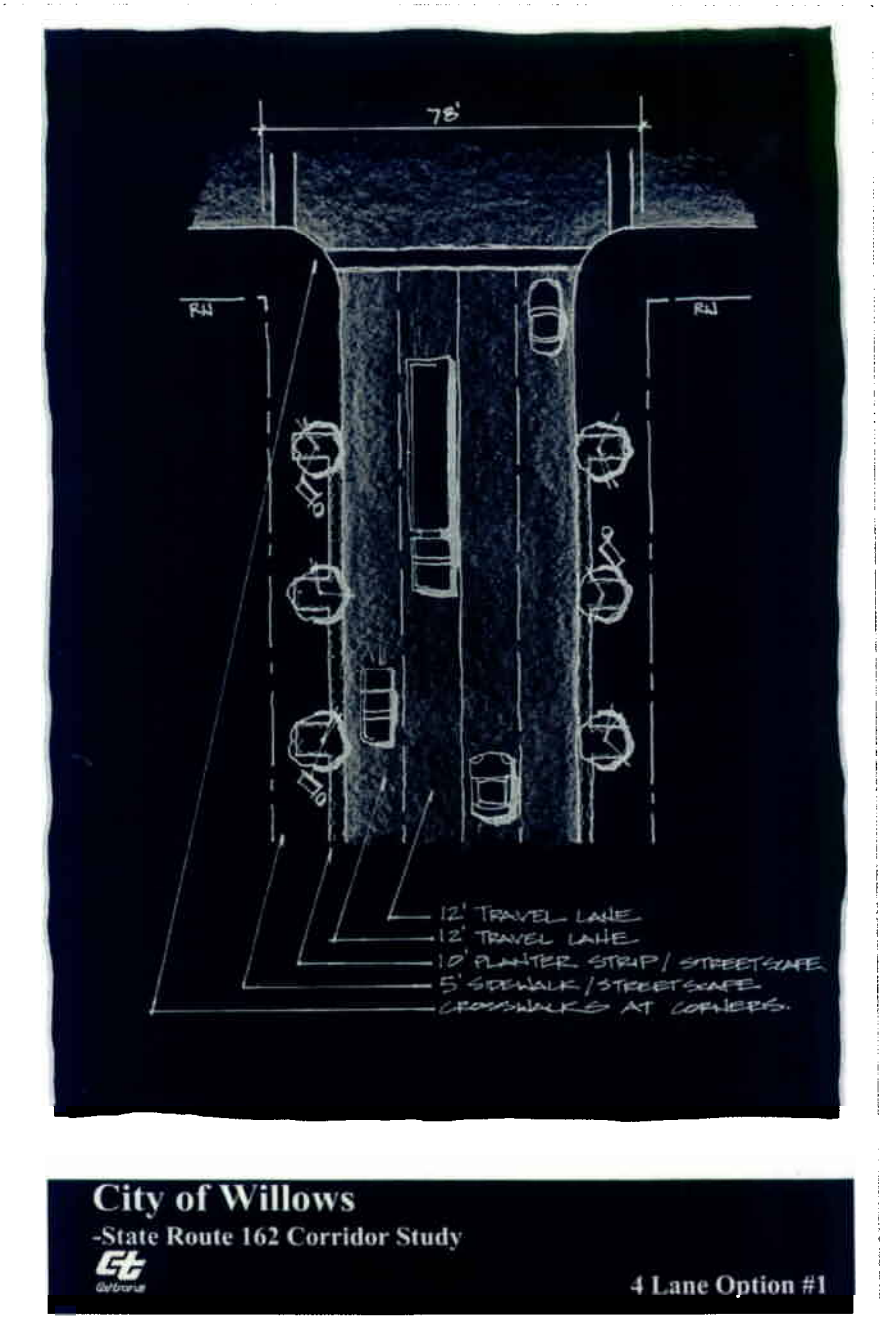
Appendix F: SR 162 (Willows) - Existing Facility



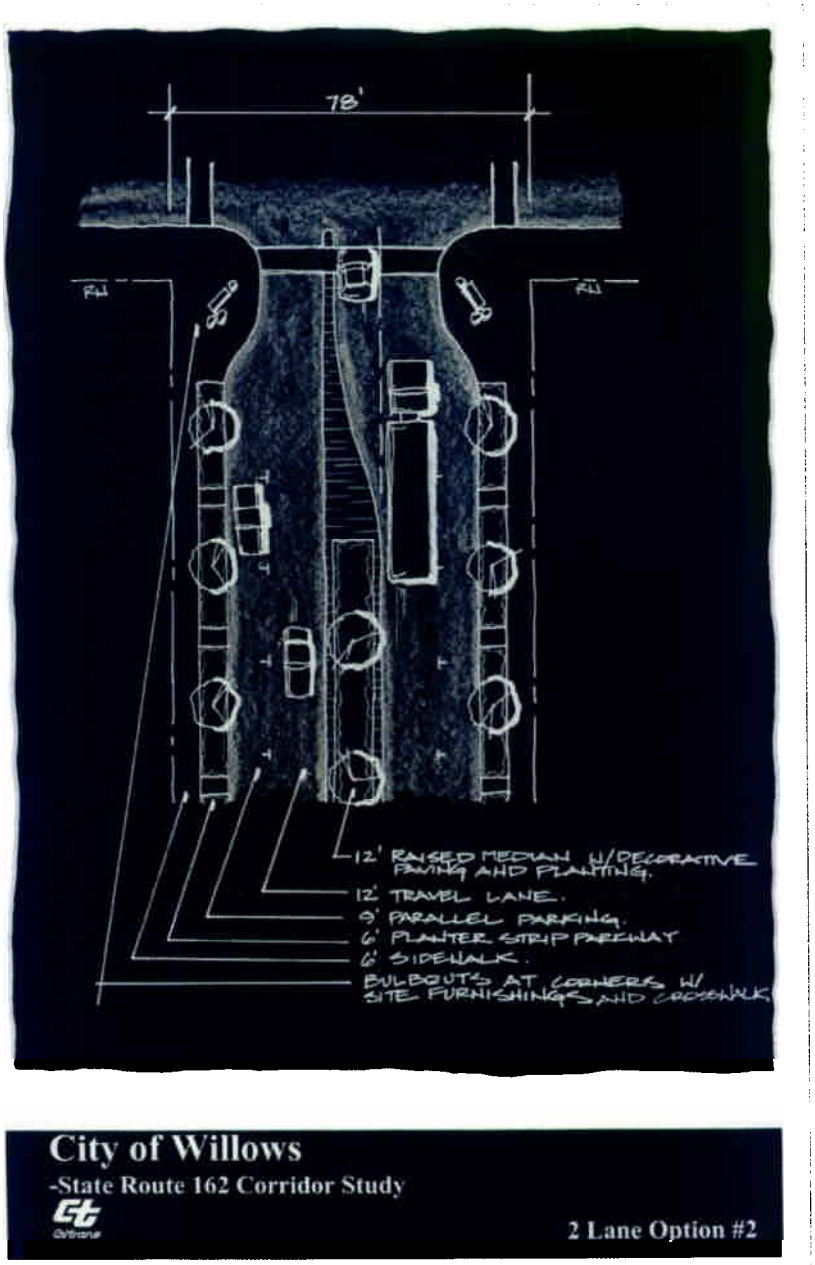
Appendix G: SR 162 (Willows) - 4 Lane Option (w/ Median)



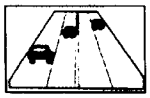
Appendix H: SR 162 (Willows) - 4-Lane Option (w/o Median)



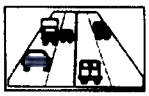
Appendix I: SR 162 (Willows) - 2-Lane Option (w/ Median & On-Street Parking)



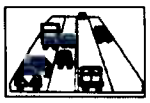
Appendix J: Level of Service



LOS A – Free Flowing Conditions.
No delays



LOS B – Speeds at or near free-flow speed, but presence of other users begins to be noticeable.



LOS C – Speeds at or near free-flow speed, but freedom to maneuver is noticeably restricted.

LOS D – Conditions where speeds begin to decline slightly with increasing flow; Freedom to maneuver more restricted.

LOS E – Operating conditions at or near roadway capacity. Even minor disruptions to the traffic stream can cause delay.

LOS F – Breakdown in vehicle flow. Queues form quickly behind point in the roadway where the arrival flow rate temporarily exceeds the departure rate.

Appendix K: Glossary and Acronyms

Acronyms and Terms taken from the "Caltrans Acronyms & Transportation Terms Commonly Used in System and Advanced Planning"

Aa

Air Basin: An area or territory that contains similar meteorological and geographical conditions. In California, the Air Resources Board (ARB) has established nine air basins.

Annual Average Daily Traffic (AADT): The average 24-hour traffic volume, which is the total number of vehicles during a stated period divided by the number of days in that period. Unless otherwise stated, the period is a year.

Average Daily Traffic (ADT): The average 24-hour traffic volume, which is the total number of vehicles during a stated period divided by the number of hours in that period. Unless otherwise stated, the period is a 24-hour period.

Bb

BCAG: Butte County Association of Governments

Buildout: Level of urban development characterized by full occupancy of all developable sites in accordance with the General Plan; the maximum level of development envisioned by the City's General Plan. Buildout does not assume that each parcel is developed to include all floor area or housing units possible under zoning regulations.

Cc

Capacity Enhancement: Projects that increase the carrying capacity of a route such as additional lanes, or operational improvements such as ramp metering.

Channelization: The separation or regulation of conflicting traffic movements into definite paths or travel by the use or pavement markings, raised islands or other suitable means to facilitate the safe and orderly movement of both vehicles and pedestrians.

Class I Facility or Bikeway: Class I bikeways (bike paths) are facilities with exclusive right of way, with cross flows by motorists minimized. Section 890.4 of the Streets and Highways Code describes Class I bikeways as serving "the exclusive use of bicycles and pedestrians."

Class II Facility or Bikeway: Class II bikeways (bike lanes) for preferential use by bicycles are established within the paved area of roadways. Bike lane stripes are intended to promote an orderly flow of traffic, by establishing specific lines of demarcation between areas reserved for bicycles and lanes to be occupied by motor vehicles.

Class III Facility or Bikeway: Class III bikeways (bike routes) are intended to provide continuity to the bikeway system. Bike routes are established along through routes not served by Class I or II bikeways, or to connect discontinuous segments of bikeway (normally bike lanes). Class III facilities are shared facilities, either with motor vehicles on the street or with pedestrians on sidewalks; and in either case, bicycle usage is secondary. Class III facilities are

established by placing Bike Route signs along roadways.

Concept: A strategy for future improvements that will reduce congestion, improve mobility, or maintain the existing level or service on a specific route.

Conventional Highway: A highway without control of access, and which may or may not be divided. Grade separations at intersections or access control may be used when justified at spot locations.

Ff

Focus Routes: A subset of the 34 High Emphasis Routes (see definition). Focus Routes represent 10 IRRS corridors that should be of the highest priority for completion to minimum facility standards in a 20-year period.

Hh

High Emphasis Routes: Routes that are characterized as being the most significant Interregional Road System (IRRS) routes. More importantly, these routes are significant in interregional travel and to maintaining and improving mobility across the entire state.

Highway Adoption: California Transportation Commission (CTC) establishment of a specific highway route location.

Ii

Interregional Road System (IRRS): A series of interregional state highway routes located outside of urbanized areas that provides access to, and links between, the State's economic centers, major recreational areas, and urban and rural regions.

IRRS: Interregional Road System

Kk

KPM: Kilometer Post-mile

Kilometer Post-mile (KPM): Using kilometers and counties, the Post-mile system identifies specific and unique locations in the California highway system.

Ll

Level-of-Service (LOS): A rating using performance measures (e.g., traffic volumes, vehicle/capacity ratios, vehicle delay times), that characterizes operational conditions within a traffic stream and perception of those measures by motorists and passengers.

LOS: Level-of-Service

Mm

Median: The portion of a divided highway separating the traveled ways for traffic in opposite directions.

Nn

National Highway System (NHS): The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 included the Interstate Highway System in the 155,000-mile National Highway System (NHS). The NHS approved by Congress in 1995, provides an interconnected system of principal arterial routes to serve major travel destinations and population centers, international border crossings, as well as ports, airports,

public transportation facilities, and other intermodal transportation facilities. NHS routes must also meet national defense requirements and serve interstate and interregional travel.

NHS: National Highway System

Pp

Paratransit: A variety of small, often flexible scheduled route transportation services using low-capacity vehicles, such as vans, to operate within urban transit corridors or rural areas. These services usually serve the needs of persons that standard mass transit services would serve with difficulty, or not at all. Often, the patrons include the elderly and persons with disabilities.

Peak Period: The period during which the maximum amount of travel occurs. It may be specified as the morning (AM) or afternoon (PM) peak, or peak hours.

PM: Post-mile

Post-Mile (PM): Using miles and counties, the post-mile (PM) system identifies specific and unique locations in the California highway system.

Rr

Regional Transportation Plan (RTP): State mandated documents to be developed biennially by all Regional Transportation Planning Agencies (RTPAs). They consist of policy, action, and financial elements.

Regional Transportation Planning Agency (RTPA): Created by AB 69 (1972) to prepare regional transportation plans and designated by the Business, Transportation and Housing secretary to receive and allocate transportation funds. RTPAs can be Councils of Government (COGs), Local Transportation Commissions (LTCs), Metropolitan Planning Organizations (MPOs), or statutorily created agencies.

Route Concept: The Department's judgement on existing and future facilities given present and future financial, environmental, planning and engineering factors.

RTP: Regional Transportation Plan

Rural Area: An area with a population of less than 2,500, and located outside the U.S. Census *urban area* boundary.

Ss

Shared Roadway: Shared Roadways have no bikeway designation. For example, many rural highways are used for intercity touring and recreational travel. However, the limited use and lack of continuity makes it inappropriate to designate these facilities for bikeways. The development and maintenance of a 4 foot-paved roadway shoulder with a 4-inch stripe can improve the safety and convenience of motorists and bicyclists.

SHOPP: State Highway Operation and Protection Program

Shoulder: The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base surface courses.

SR: State Route

State Highway Operation and Protection Program (SHOPP): A 4-year program limited to projects related to state highway safety, maintenance, and operation.

State Route (SR): State highways within the State, other than Interstate and US routes, which serve intrastate and interstate travel. These highways can be freeways, expressways, or conventional highways.

Tt

TCR: Transportation Concept Report

TDM: Transportation Demand Management

Transit: Generally refers to passenger service provided to the general public along established routes with fixed or variable schedules at published fares.

Transportation Concept Report (TCR): Also known as a Route Concept Report (RCR), a document that identifies current operating conditions, future deficiencies, a Route Concept and Concept Level of Service, and improvements to the route or corridor that will achieve the concept.

Transportation Demand Management (TDM): Demand-based techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules that enable employees to commute to and from work outside of peak travel periods.

Uu

Urban Area: An area with a population of 2,500 to 49,999, and not located within U.S. Census *urbanized area* boundaries.

Urbanized Area: An area with a U.S. Census population of 50,000 or more, and includes *urban area* boundaries.

Appendix L: References

1. Draft General Plan for the City of Oroville. Modified for the City of Oroville by Willdan Associates. January 1995.
2. City of Willows General Plan: Land Use Element. Prepared for the City of Willows by William A. Davis of North California Planning and Research. July 9, 1996.
3. Butte County General Plan: Draft Background Report. Prepared for the County of Glenn by Wallace Roberts & Todd; Omni-Means; Psomas and Associates; LSA Associates; Angus McDonald & Associates; and J. Laurence Mintier & Associates. March 10, 1993.
4. Glenn County General Plan: Draft Policy Plan. Prepared for the County of Glenn by QUAD Consultants. November 1992.
5. Butte County 2001 Regional Transportation Plan 2001-2025. Butte County Association of Governments. 2001.
6. Transit Consolidation Study Summary Report. Prepared for Butte County Association of Governments by Nelson\Nygaard Counsulting Associates. January 2001.
7. Outreach Flyer. Sacramento River National Wildlife Refuge. <http://sacramentovalleyrefuge.fws.gov/SRNWR.htm>. August 2000.
8. E-1 City/County Population Estimates, with Annual Percent Change, January 1, 2001 and 2002. State of California, Department of Finance; Sacramento, California. May 2002.
9. Caltrans Acronyms & Transportation Terms Commonly Used in System and Advanced Planning. California Department of Transportation.
10. Master Plan for Oroville Municipal Airport. Prepared for the City of Oroville by Reinard W. Brandley, Consulting Airport Engineer. July 1990.